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The Wood Thrush

W. V. CRICH

CONTENTS

THE GOLD COAST—GHANA • TULIP-TIME IN OTTAWA
THE EASTERN ARCTIC PATROL
SWISS WATCH SCHOOL • HISTORIC ARGENTEUIL COUNTY



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CONTENTS

MAY, 1957 + VOLUME LIV + NUMBER 5

COVER SUBJECT:—*The Wood Thrush.*

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	Page
THE GOLD COAST—GHANA	176
by O. E. AULT	
TULIP-TIME IN OTTAWA	186
by MALAK	
THE EASTERN ARCTIC PATROL	190
by R. A. J. PHILLIPS	
SWISS WATCH SCHOOL	202
by PAUL TSCHUDIN	
HISTORIC ARGENTEUIL COUNTY	206
by W. GREENING	
EDITOR'S NOTE-BOOK	VII
THE TRAVEL CORNER	VIII
AMONGST THE NEW BOOKS	XI



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The Gold Coast—Ghana

by O. E. AULT

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GHANA became an independent nation and the youngest member of the Commonwealth on 6 March 1957. For sixty years, the country was a British colony called the Gold Coast. The name Gold Coast was given it by tradesmen in the fifteenth century who found native negroes adorned with trinkets made of gold which was available on the hills near the coast. For the new name, Ghana, the Prime Minister, Dr. Kwame Nkrumah, had to reach farther into history, where he found an ancestral kingdom of great power in the Southern Sahara in the third century. This ancient Ghana flourished in material wealth and in culture but lost its influence and further reason for historic reference through the exhaustive business of survival in a competitive tribal world. The Ghanaians of those early days probably moved south to the Accra plains, where 600 years of primitive living produced this present generation of people with a will for independence so strong that slow-moving British colonialism could not resist it.

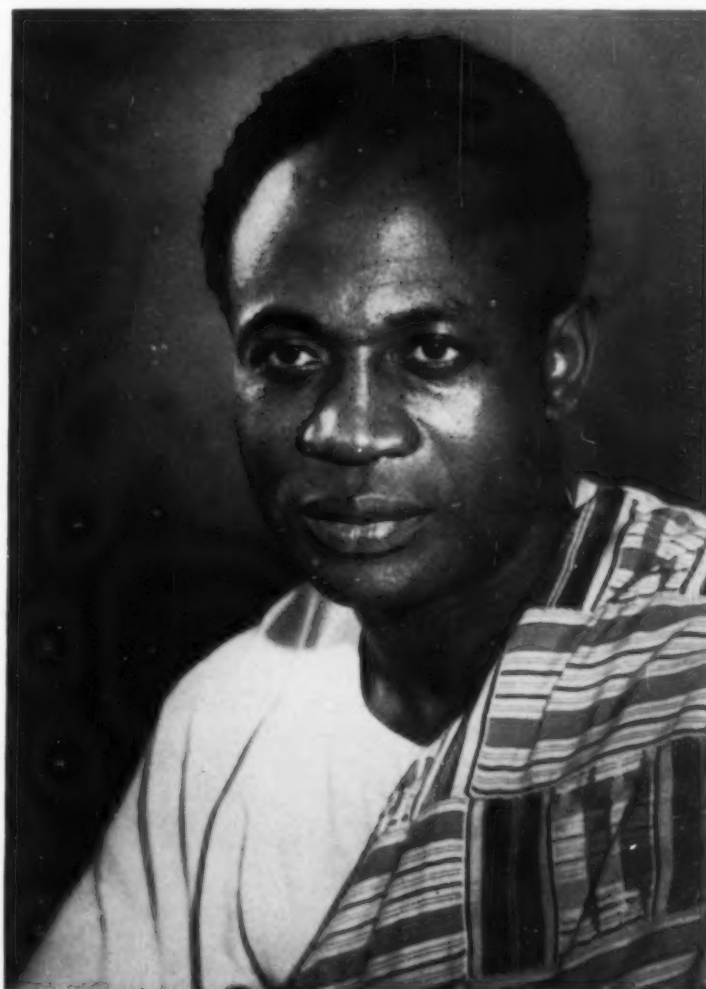
The leaders of this Gold Coastian independence movement clashed twice in ten years with the British, who were the protectors, suppliers, traders and administrators for the five million people of the colony.

The Ashanti Wars in which Britain became involved in tribal rivalries were scarcely wars of independence. The first rebellious act that hurried the processes of the birth of a nation was a boycott of British goods and a clash of World War II veterans with the police in 1948 when blood was shed on both sides. The second was a general strike accompanied by forthright speeches against imperialism that brought prison terms for Nkrumah and some of his associates for inciting illegal strikes. The good sense and wise counsel of a new Governor, Sir Charles Arden-Clarke, now the first Governor-General of Ghana, measured the progress of preparation for statehood on the one hand and the relaxation of control on the other.

Dr. Kwame Nkrumah, the Prime Minister of Ghana. He was educated at mission schools and at Achimota College. He studied economics, theology and education in the United States, and law in the United Kingdom. Dr. Nkrumah has been Prime Minister since that office was created in 1952.

Ghana Information Services photograph.

The Prime Minister of the Gold Coast was elected to this high office by the first legislature in 1951. He was in prison at the time. He was reprieved from his prison sentence by the Governor and immediately he was named Leader of Government Business by the same Governor. Dr. Nkrumah, now forty-seven years of age, a bachelor, and a former Roman Catholic, was educated in local schools, held a scholarship abroad and was graduated from Lincoln University in the United States. He had a brief career in education in America and Britain, and came back to the Gold Coast in 1947 as Secretary of the United Gold Coast Convention, a self-government movement led by Dr. Danquah. Within six months he founded a new party, the Convention People's Party, which is in power in the legislature today and has been since the famous prison election of 1951. The slogan of the Convention People's Party, re-





Pottery from native clay. The pots will be used for food and water.



iterated with emphasis and eloquence throughout the country by Nkrumah and his associates, was "Self-government Now". The adverb "now" and the persistence of Nkrumah won the majority to his side even though all political parties advocated independence. In the gradual development of the Gold Coast through the stages from primitive tribalism to political independence, the British Colonial Office and devoted British civil servants deserve the greatest praise.

Ghana is a country of tribes, each with an *ohene* or chief, a language or dialect, a tradition, and an identity that is lessening in significance. Perhaps unfortunately, the migration and mingling of people is dissolving the cohesive elements of the tribes and leaving only families and people. The Asantehene, the paramount tribal chief of the Ashantis, still has much influence. He presides over the Council of Chiefs in his region and the decisions made are of considerable political significance. The

A village scene in the Northern Territories of Ghana.

Ghana Information Services photographs

A weaver plies his craft at Flyboyiri. The practice of arts and crafts is encouraged throughout the Gold Coast by mass education teams, who also teach reading and writing. Flyboyiri was the first village to be resettled in the Kamber River area after the clearance of the dreaded tsetse fly, the carrier of sleeping sickness, and was named after the "fly-boys" who worked in the area.



Below:—

A housewife in Yendi pours water into a container while her husband eats his mid-day meal and the children play. Yendi is an agricultural market town of some 7,000 inhabitants in the Northern Territories of the Gold Coast, which today has a pipe-borne water supply. Between 1950 and 1955 the Gold Coast Department of Rural Water Development provided wells, boreholes or piped water supplies for nearly 300,000 people in country districts.





Station Road, Accra, looking north towards Tsawam. Accra, the capital of the Gold Coast, is the home of 150,000 people. The town is developing fast. New official and commercial buildings of modern design are springing up, and a special memorial arch is being built to commemorate independence.

Secretary of State for the Colonies on his pre-independence visit to ease the tension over the terms of the constitution travelled to Kumasi to meet the Council of Chiefs of Ashanti and to Tamale to meet the chiefs of Northern Territories. The chiefs were concerned about the centralization of political power in Accra, the capital, and especially the possible domination of the Cabinet, if safeguards were not provided. Those who had led the central government to the brink of self-

government insisted that democratic processes could not effectively work through divided authorities, the legislature and the independent Councils of Chiefs. The problem is a real one that history has thrust on the 1950s in many parts of the world. Probably the newer methods of man's relation to his fellow citizens will prevail, in hot, humid, dark-faced Ghana. The new constitution gives political control to the legislature and provides for the protection of the rights of chiefs.

Tribes live in villages. The scrub plains of the coast, the tropical farm areas of Ashanti, the seared ridges of the Northern Territories, and the valleys of Togoland are dotted with these swish-house* villages. The common elements of villages are mud-brick houses, natural erosion from tropical rains, cleanliness without tidiness, goats, children, people, food pots

*Swish-house is an African name for a house made with small poles for framework, mud or baked earth for walls, and thatch or grass for roof.

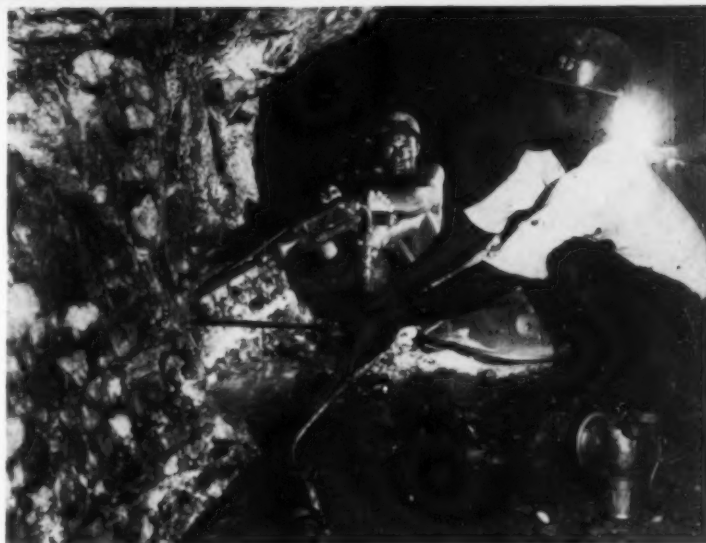
Timber logs in Takoradi harbour. On arrival they are towed into the "log pond" where they await shipment. The Gold Coast produces a wide range of valuable timbers, including mahogany, for export and home use.



Mining for gold in the Ashanti Mine—a rich deposit in quartz rock.

Ghana Information Services

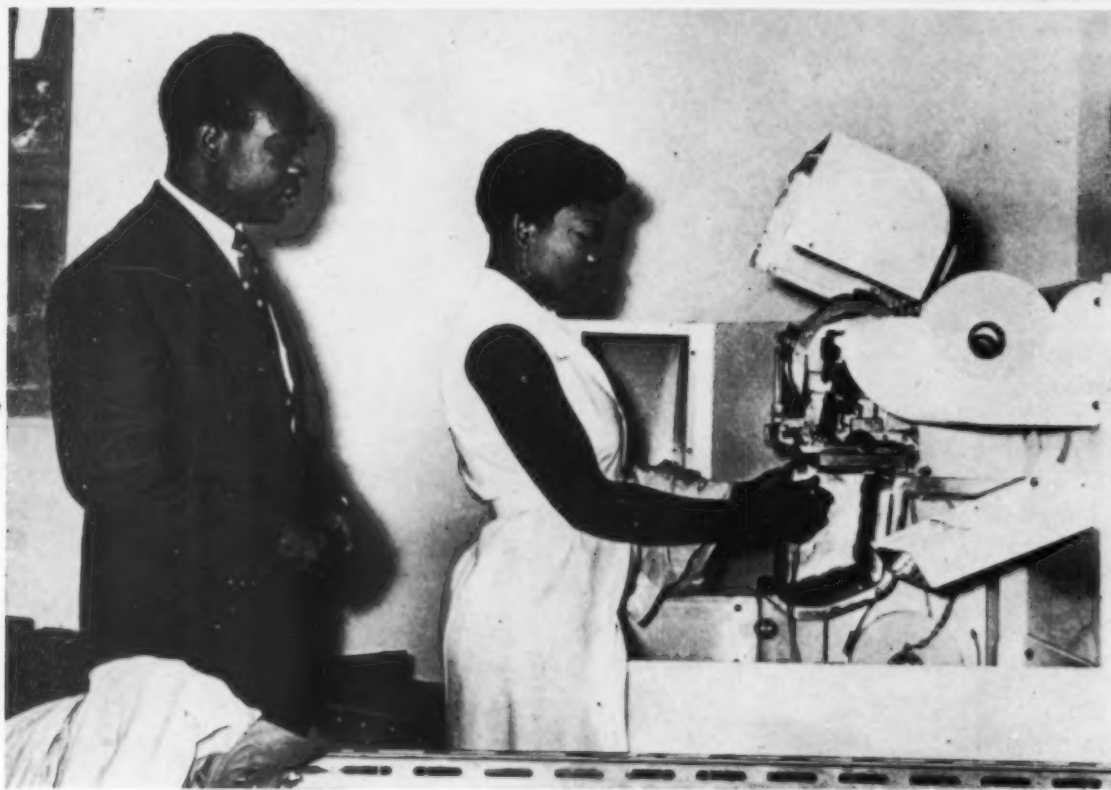
where meals are cooked, and drums. Families live in compounds with cousins, aunts, and nephews who stay for weeks or years according to whims and circumstances. By custom they are never refused hospitality. The country is basically agricultural, and all members of the family are expected to work on the farms nearby. These farms are difficult for the Canadian-trained eye to find. A villager leaves his village in the early morning followed by wife, children, and visiting relatives. At some point along the road, they disappear into the bush. At some distance along a path, a plantain, cassava, banana or cocoa patch about one acre square is roughly indicated by a cotton tree in one corner, a boulder in another and a termite hill in another. Even these are known only to the farmer and his neighbour. The relentless tropical forest claims these farms at intervals and only burning will release its hold. Otherwise farming on a small scale (and scales are



small) is not difficult for an African. He plants a few cocoa shoots which in three years bear cocoa pods on which the economy of the country is based. In 1955, these patches of cocoa trees brought in over £65,000,000 from chocolate-eating Westerners, particularly in Britain, the United States and Canada. The farmer's cocoa shoots grow into trees and for fifteen years he has an income from cocoa pods with

The new bridge across the Volta River at Adomi, which together with a new trunk road, part of which can be seen in the background, will link the new port of Tema with Togoland. The bridge was ready to carry traffic in December 1956.





Dr. Kwame Nkrumah, the Prime Minister, watches an operator at work on a machine producing metal labels in a factory set up under the auspices of the Industrial Development Corporation of the Gold Coast.

A plant physiologist and his assistant examine a cacao tree cutting in the Plant Propagation Section of the West African Cacao Research Institute at New Tafo.



little work. Plantains and bananas require more frequent planting but not much care. Cassavas and yams, the main elements of local diet in the Gold Coast, have to be hoed and kept free from other vegetation.

But dry seasons come. Swollen shoot virus kills the cocoa. Farming in any country has some difficulties. A good-natured pessimism about prices and politics prevails. The most pathetic aspect of farming in the Gold Coast is cattle-raising. A small native breed roams the Northern Territories plains feeding on shoots and scrub and, until the veterinary came, fighting a losing battle with predatory insects. Yet the Gold Coastian needs a cow to barbecue for a birthday party or a funeral or better still to barter for a bride. Goats may be substituted, but a cow, even a scrawny one, is evidence of greater prosperity. Since proteins are scarce, meat must be imported, and it is — on the hoof. Thousands of scraggly, horned and humped desert cattle from French territory are herded by traders on a 400-mile weary trek from the north to Accra, where the emaciated animals are slaughtered for indifferent food. Work is being done by devoted officers in the Department of Agriculture to overcome some of the farmer's difficulties. Actually the country is well supplied with starchy foods and it has a fair amount of fish. The people do not suffer from malnutrition.

Villagers learn to build their own houses at the Rural Training Centre in Kwaso, Gold Coast.



The Gold Coast Legislative Assembly in session, presided over by the Speaker. In it all the people of Ghana are represented. Its 104 members are elected by secret ballot under universal adult suffrage.



To the foreigner, two interesting phenomena of the Gold Coast are "mammies" and witch doctors. There is no relation between the two. A mammy is a woman who engages in trade, usually in food, cloth, trinkets, or small household needs. She sits in the market with her wares and her smaller children from seven in the morning until five o'clock at night. Her trek to and from market is on foot, sometimes from a distance of five miles with her wares carried on her head and her baby on her back. From greater distances, she comes with thirty or more others by a conveyance called literally enough a "mammy lorry". Her husband has his own occupation but she trades. Her influence is great but she does not enter politics to wield it. A prominent departmental store in Tarkwa sells sugar cubes at three shillings six pence a box. The mammy buys the sugar cubes from the same departmental store and sells them on the street beside the store at three shillings a box. Down the street she sells to the Africans at two cubes for a penny, realizing four shillings two pence a box. The mammy is stout, stolid and good natured. She has not studied economics, but the income tax officer

A meeting of the Management Committee of the Kumasi Co-operative Union in Ashanti. Kumasi is the centre of a cocoa-growing area. The union has some sixty rural societies and a membership of about 6,000 farmers. These societies buy the cocoa from the farmers and sell them consumer goods. The Co-operative Central Bank lends money to the Co-operative Union to pay for the cocoa delivered by members.

The Chairman of the Elmina Local Council gives his first address to the members of the Council. This Local Council at the seaport of Elmina in the western region was formally opened by the Regional Officer in December 1955.





A view of the new Central Hospital and Nurses' Training Centre at Kumasi in Ashanti. This hospital is expected to cost over £2,500,000 and to provide 500 beds when complete. Its out-patients' department was opened early in 1955. Several of the ward blocks were in use by the end of 1956.

has not yet been able to find assessable portions of her wealth.

The witch doctor is mysterious and yet is as real as the mammy. Most villages have one in person or in spirit. He or she prevents, hinders, or assuages ill fortune for a fee. During pregnancy, a woman wishes her baby to be protected and her delivery to be normal. The witch doctor can ensure her against invasion by an evil spirit. A villager has created an enemy by misdeed and he needs protection lest the enemy or his agent in the spirit world attack him. The witch doctor's advice and protection is sought. People in primitive communities, with accumulations of unexplainable events in their history, seek and accept the meanings



Schoolboys and a teacher in the grounds of the Opoku Ware Boys' Secondary School at Kumasi in Ashanti. This boarding school, in its new and modern building, was established in 1952.



Exterior of part of the new building of the Kumasi College of Technology. In 1952 the college was housed in temporary buildings, but these have now been augmented by modern permanent buildings, including lecture rooms, an engineering laboratory and workshop, and a pharmacy block. Kumasi is the capital of Ashanti.

Students with a senior tutor outside Legon Hall, one of the halls of residence at the University College of the Gold Coast, near Accra.



read into these events by those who pretend to know. Fetishism, jujuism, and related superstitions result. Ghost and spirit stories are prevalent. There are even prizes for the best ones in a local newspaper. Some of these beliefs take barbaric form, such as mutilation and sacrifices of wives or sons on the death of a chief. But British law has prevailed against most of these. Christianity and the Moslem religion have spread their influences and disciplines into the lives of a considerable number of Gold Coastians.

The British Colonial Service is leaving in Ghana the main elements of western civilization, to be fostered, nourished and developed according to the growing capacity of Africans. These are: a political system based on responsible government and protection of minorities; a Civil Service; a police force; an educational system from primary school to university with an expensive struggle to extend literacy beyond the present forty per cent; a framework of local government to organize and develop local services; communication systems to provide for movement of people, products and ideas; some enlightenment in science and the arts; and an established relationship with the outside world.

Geographically, Ghana is a vertical sandwich, shaped unnaturally by war and peace a century

ago. Plans for irrigation, industry and development have all preceded independence. Yet five years of cocoa wealth and a recession in the cocoa market have made the government cautious. Gold and timber still help to pay a part of the costs of government services. The economic future is uncertain. The eastern Atlantic washes the sands of Ghana's southern shore. French West Africa surrounds its artificial edges. The great Volta River gathers surplus rain from winding streams and conveys it down the eastern side to the sea. The Volta has been surveyed, measured and captured in men's dreams to produce electricity for converting bauxite to aluminium.

Ghana is now the hope of Africa. It has achieved independence, the expectation of other African people. The leaders of Ghana have the tremendous responsibility of proving to the world in general and Africans in particular that they can develop this country in the freedom and prosperity that the people expect. The Ghanaian people, whether Ashanti, Ga, Twi, Fante, Ewe, or other tribe, have no common language except English. They have engraved on their commemorative arch, surrounded by the stool symbols of all tribes, the words that mean the most to individuals in any language, "Freedom and Justice".



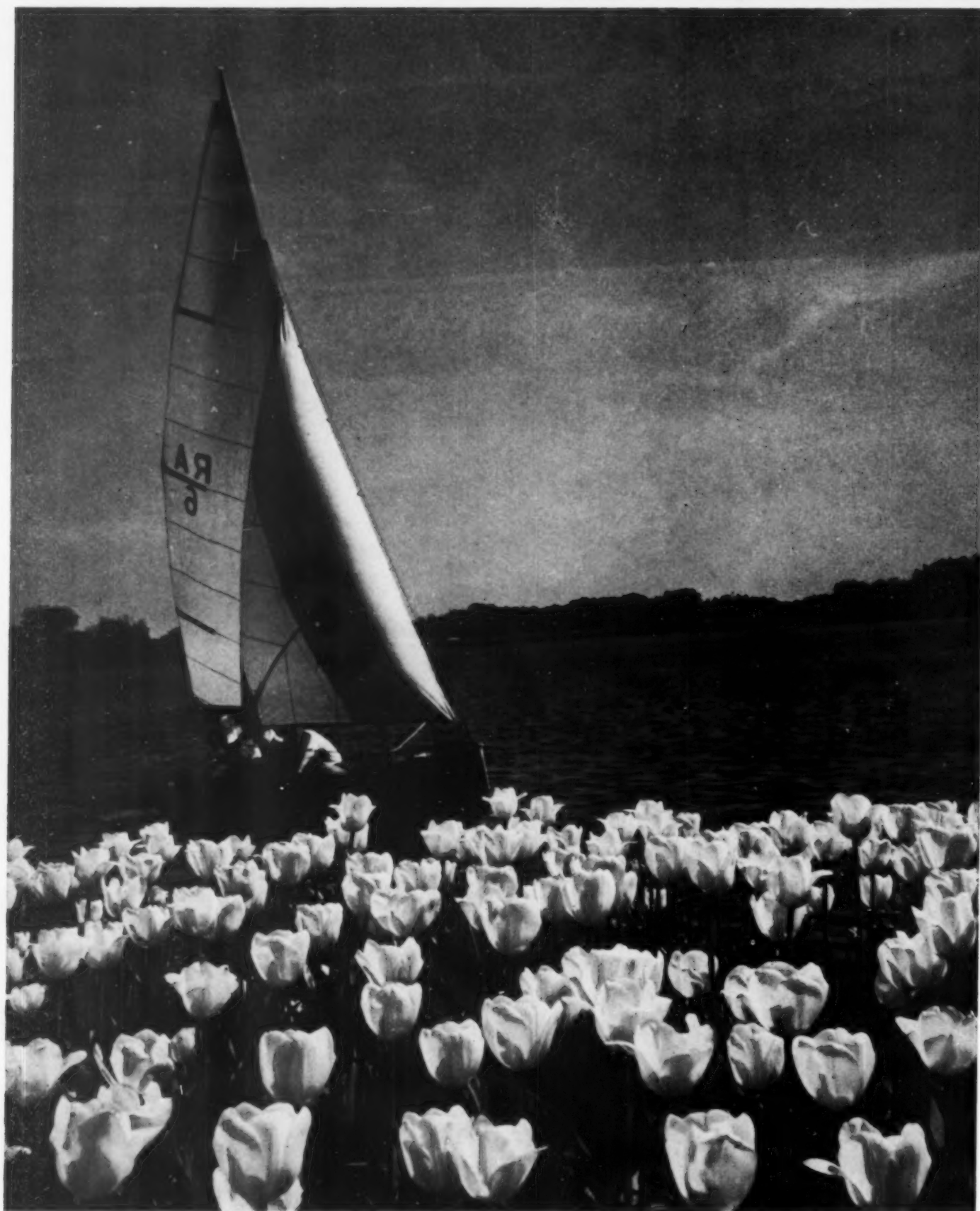
Tulip-Time in Ottawa

Photographs by MALAK

In May, the month of Ottawa's annual tulip festival, some 1,000,000 tulips, ranging from white through almost all the colours of the rainbow, bloom along the Federal District Commission's Driveways, at the Dominion Experimental Farm, on Parliament Hill, in parks and numerous other public places. Most of the public floral displays are arranged by the Federal District Commission; but hundreds of home-owners have also planted tulips in their gardens. It was not until after the Second World War that the flowers attained their present popularity. During the war Queen Juliana of the Netherlands (then Princess) had lived in Ottawa. When she returned home, she graciously donated 20,000 tulip bulbs to the city and promised to send 15,000 a year as long as she lived. To this generous gift the Associated Bulb Growers of Holland added another 100,000 bulbs. The largest bed, on the east side of Dow's Lake (partly shown here), contains 70,000 bulbs.



Parliament Hill becomes gay at tulip-time. The flowers usually commence blooming about 10 May and continue to bloom for three or four weeks. They are at their peak during the festival, which is held 13—30 May. During this period the city is a veritable bower, for about 1,500,000 other spring flowers bloom at the same time. Today Ottawa has the largest public display of tulips on the continent, and the spreading fame of its beauty brings more visitors every year. The festival is sponsored by the Ottawa Board of Trade.



In the west end of the city, the Driveway passes close to Dow's Lake where sailboats and tulips make a striking picture in the month of May. The largest tulip bed is on the east side of the lake, shown here. The unique method of planting employed by the Federal District Commission, responsible for this area, is known as the "flowing mass display". The main tulip beds are large and built around a few strong colours with paler shades to provide accent. They are carefully designed to suit their surroundings. Most of the beds here are on slopes near curves on the road, so that both motorists and pedestrians may enjoy them.



Stately tulips lift their petals to the sun on every side, from Rideau Hall, the Governor-General's residence, to the Smiths' back-yard. Over 200 varieties of tulips are used in the public displays alone. At the Dominion Experimental Farm near Carling Avenue there are three beds, each containing about 10,000 tulips of the latest varieties; many of these are gifts of the Associated Bulb Growers of Holland. The festival, which was only inaugurated in 1953, is expected to grow in importance, for Ottawa has not yet stopped planting bulbs and every spring her tulip beds seem more dazzling.



The C.G.S. Arctic in the ice of Pond Inlet, Baffin Island, in 1922. The ship first visited the Eastern Arctic under command of Major Moodie of the Northwest Mounted Police in 1905. She was used by the Eastern Arctic Patrol until 1925.

J. D. Craig

Captain J. E. Bernier beside the binnacle of the Arctic in 1923. He assumed command in 1906 and made a number of significant expeditions to the Eastern Arctic.

J. D. Craig



The Eastern Arctic Patrol

by R. A. J. PHILLIPS

Introduction

TIMES HAVE changed in Canada's Eastern Arctic. Communities which once knew the splendid isolation of another world are now in almost daily communication with the cities of the south. Aircraft and radio have made neighbours of distant places and even across the lonely ice-strewn water passes a growing traffic of ships. The changes in the Eastern Arctic Patrol over the decades have mirrored the changes in Canada's Eastern Arctic. Its development is a reflection of the opening of Canada's distant northern territory.

Origin of the First Patrols

It was in 1880 that Canada first acquired title from the United Kingdom to the vast and scattered Arctic archipelago that lay adjacent to her northern shores. Scarcely a Canadian had ever seen this northern heritage when, in 1884 a government party headed by Dr. Robert Bell, geologist and medical officer, sailed in the steamship *Neptune* from St. John's, Newfoundland, to study currents, tides, sea temperatures, geology and the fauna at various points in Hudson Strait. Here the party established scientific stations and manned them during the winter; they also took soundings in Churchill harbour. Dr. Bell devoted some attention to the Eskimos, but his interests were wholly scientific; the day of the administrator was still far off.

A second patrol was made the next year, and a third in 1887. None of the expeditions went farther north than Hudson Strait, and when their work was completed, no Canadian patrol ship touched Arctic waters for another ten years. It was not till June, 1897, that the *Diana*, under Commander Wakeham, went as far north as Cumberland Sound, on the east of Baffin Island, where in a solemn and lonely ceremony, Canadian sovereignty over Baffin Island was restated.

The next year, while Canadian ships remained in more temperate waters, the Norwegian explorer Otto Sverdrup entered the

archipelago in the *Fram*, and spent four years in scientific exploration. He also made extensive territorial claims on behalf of the King of Norway, which caused much uneasiness in official circles at Ottawa.

It was another Norwegian, Raold Amundsen, who shortly afterwards made history in the Canadian Arctic by completing the Northwest Passage. The Canadian Government became more and more conscious of the need for definite action if the recently acquired Canadian Arctic were not to be lost to foreign flags. This concern for Canadian sovereignty was one of the main reasons for a series of patrols in the Eastern Arctic.

Establishment of Regular Patrols

The first of the regular series was headed by Major Moodie of the Northwest Mounted Police, Acting Commissioner of the (then) unorganized Northwest Territories. They left Halifax in *S.S. Neptune*, August 1903, wintered at Fullerton, went north as far as Cape Sabine on Ellesmere Island, visited Beechey Island, North Devon Island, Somerset Island and Bylot Island, leaving flags in their wake to mark Canadian dominion. They returned to Halifax in October 1904. The following season, Major Moodie headed another party, this time in *S.S. Arctic*.

In 1906 Captain Bernier took the *Arctic* on the first of his expeditions. It was on 24 August that year that the Eastern Arctic Patrol probably carried out its first strictly administrative task when it notified whalers in North Baffin Island that they must take out licences under Canadian whaling regulations. The expedition visited a large part of the Eastern Arctic reaffirming Canadian sovereignty as it went, and returned to Quebec in 1907. Captain Bernier again sailed in the *Arctic* in 1908 and this time the party included a medical officer, a historiographer, a meteorologist, a geologist and a naturalist. They went as far west as Banks Island before returning in October 1909.

When Captain Bernier sailed north again in 1910 and 1911, he added a prospector and a taxidermist to his party. This patrol not only took further steps to regulate and to license whaling and to collect customs dues, but also made the first attempt to complete a comprehensive census of the Eskimos. The captain's work in the Arctic continued to 1929, but long before this other explorers had taken the centre of the stage.

Stefansson's patrols on behalf of the Canadian Government lasted from 1913 to 1918. They were chiefly concerned with mapping the Western Arctic, taking soundings, and leaving records to establish Canadian sovereignty.

The expeditions made up till the end of the First World War were very different from the patrols which succeeded them. The early traders had not penetrated sufficiently to disturb the old Eskimo way of life and the native methods of hunting. Permanent trading posts, or stations of Royal Canadian Mounted Police were as yet unknown, and the earlier patrols had been concerned with little beyond scientific research and Canadian dominion. Medical care and administrative work were of necessity very rudimentary by modern standards. But after the First World War, the establishment of Royal Canadian Mounted Police and fur-trading posts led to a new factor in Arctic life—the permanent white resident with his different outlooks, his moral concepts, and the rule of his law. And at the same time the Eastern Arctic Patrols changed.

The Annual Patrols

The year 1922 was a landmark, as it saw the first of an unbroken series of regular annual

Eastern Arctic Patrols, now becoming more administrative in character. The officer in charge, J. D. Craig, was accompanied in *S.S. Arctic* by an inspector of the Royal Canadian Mounted Police, nine constables, a representative of the Air Board, two surveyors and a cinematographer. The ship also carried in her hold seventy-five tons of supplies for R.C.M.P. posts and 225 tons of lumber for police buildings.

The next year, with the same officer in charge, the patrol included Major Burwash, an engineer from the Northwest Territories and Yukon Branch of the Department of the Interior, who became the first representative of the present Northern Administration Branch of the Department of Northern Affairs and National Resources to accompany a patrol. On this voyage, the medical officer made the first attempt to carry out a methodical health survey of as many Eskimos as could be brought to the ship.

The *Arctic* carried the patrol each year until 1925, and then she was replaced for the next six years by the *Beothic*. The patrol usually included a representative of the Department of the Interior as officer in charge, members of the R.C.M.P., a medical officer, geologists, wireless operators and occasionally other scientists. About this time the cinematographer became a relatively permanent fixture, though in 1927 his place was taken by an artist.

The *Ungava*, making twenty-five calls in a journey of 9,000 miles, carried the patrol in 1932, and in 1933 the Canadian Government used the Hudson's Bay Company's famous *Nascopie*, beginning her long period of service in the Eastern Arctic under the command of



The C.G.S. Beothic off Pangnirtung, Baffin Island, in 1931. This vessel took the place of the Arctic in 1925.

The famous Hudson's Bay Company vessel, R.M.S. Nascopie, at Craig Harbour on the southern tip of Ellesmere Island in September 1935.



Captain Thomas Farrar Smellie, with Major D. L. McKeand as officer in charge. The work of the patrol was growing fast. By 1936 the post office representative had 19,000 pieces of mail to handle during the trip.

On the outbreak of the Second World War, national registration was carried out in the Eastern Arctic under the supervision of the officer in charge of the patrol. In 1941 arrangements were made for taking a census, and identification discs were distributed to the Eskimos. Victory bonds were sold across the Eastern Arctic, and it is to the credit of the patrol that they exceeded their quota by fifteen per cent.

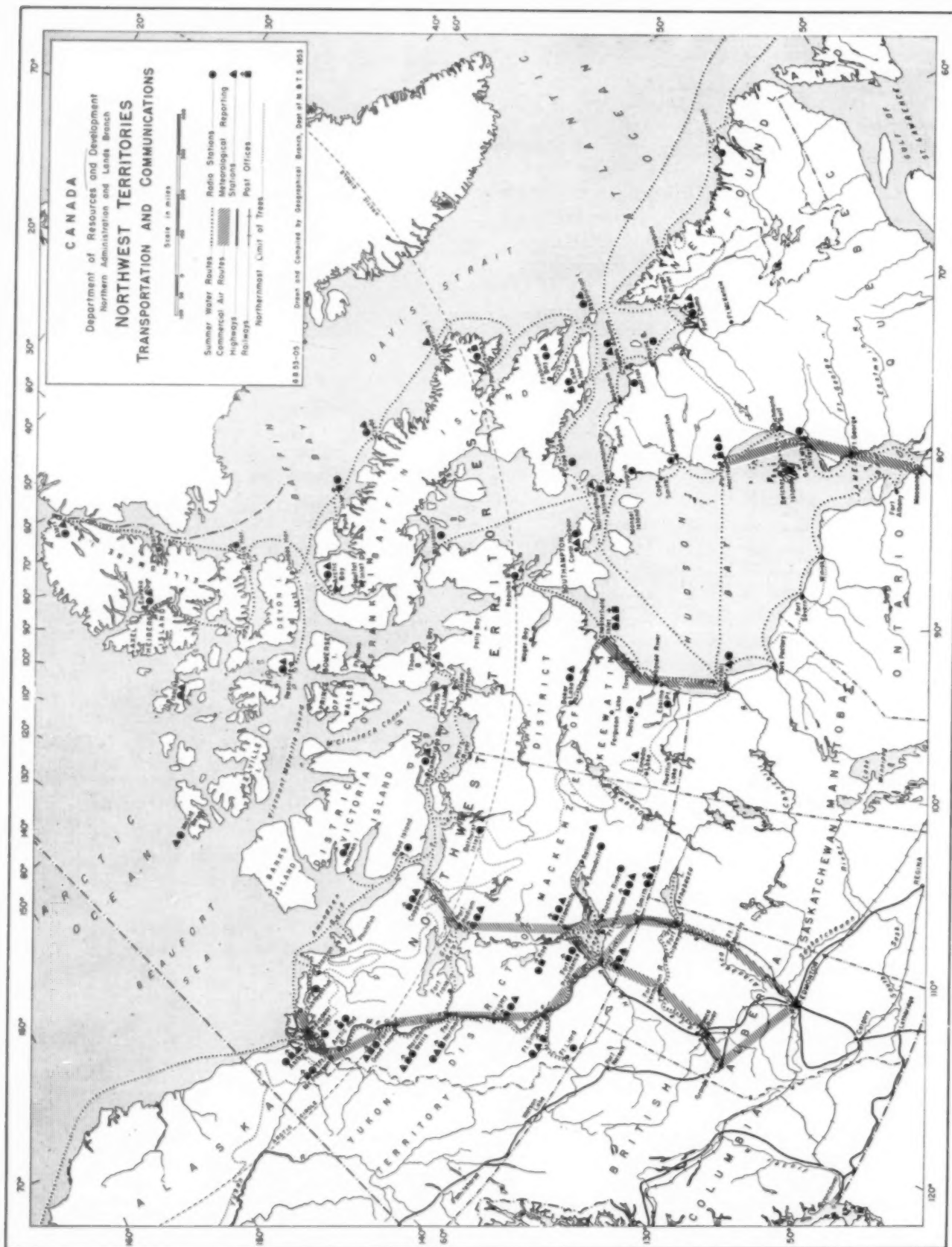
In 1944 a vigorous campaign was started to control the worst plague of the Arctic, tuberculosis, and on the last complete patrol carried out by the *Nascopie* there were no less than six medical officers, an X-ray technician, a dentist, an oculist and optical technician and two nurses. In 1947 the *Nascopie* sank on a reef off Cape Dorset, and for the next two years the patrol was seriously handicapped for lack of a vessel suitably equipped to meet the stern conditions of the Eastern Arctic. By 1950 the *C. D. Howe*, the first ship built as an Arctic patrol vessel, came into service and a new era began to dawn.

The north was gradually becoming more accessible and the patrol ship was no longer the only link between the lonely outposts and the outer world. In 1945 the introduction of family allowances had revolutionized the economy of the Eskimos, whose low cash

income made this allowance of great relative importance in terms of more nourishing food and better clothing for children. Infant mortality was dropping and, with regular medical care, life expectancy was rising. Wage employment was spreading, federal day-schools were springing up. Those who only a decade before had been regarded as members of an unknown northern tribe now became individual names on welfare files in government offices. Symbolic of the new approach to the Arctic was the loan fund to help the Eskimos invest in equipment to improve their earning capacity, in other words to help the Eskimos to help themselves. Some of this work can be handled by mail which now, with the help of dog-sled and aeroplane, reaches every community in the Eastern Arctic more than once a year. But there is much that can never be just a subject for official letters. In most settlements, ship-time is the event of the year, calling for special celebration by Eskimos and white men alike, to welcome the arrival of mail, news, food, clothing, books, or possibly a new warehouse from floor-joist to chimney-cap. It is a time for discussion and the exchange of ideas, the assessment of the present, the mapping of the future. For this, nothing can replace the personal touch.

The Patrol Today

The Eastern Arctic Patrol today consists of a group of about twenty-five officials representing departments of government having responsibilities in the Arctic. The officer in



charge is appointed by the Department of Northern Affairs and National Resources, and from that department also come one or more school inspectors, an interpreter with additional duties as welfare officer, and a secretary to the patrol. The largest departmental representation comes from the Department of National Health and Welfare, whose medical party may include specialists as well as regular examining officers and technicians. Other departments represented include the Royal Canadian Mounted Police, National Defence (Canadian Rangers and Air Observer Corps), the Post Office, and Mines and Technical Surveys. The patrol is organized in Ottawa long before ship-time, when members of the patrol decide on the contribution which they can make to the common task. So fast has the work of the patrol grown since the ship was built that her facilities are often severely taxed.

In the third week of June the patrol assembles on the *C. D. Howe* at Montreal. She is an ice-strengthened ship rather than an ice-breaker and has to avoid heavy packs. Navigation in ice-filled waters demands a little luck and a lot of skill if the ship is to get through on schedule. A week after departure the *C. D. Howe* reaches the first point of call in Hudson Strait. If there is heavy ice, the ship's helicopter may probe thirty miles ahead to inform the captain of the best route to follow and thus avoid the frustration of sailing up false leads of open water, only to be blocked by ice barriers.

Half an hour before the *C. D. Howe* slips into anchorage, the helicopter may touch down on shore, bringing a representative of the patrol to discuss with the waiting residents the patrol's programme in the precious time it has to spend in each place. It may be as short as twelve hours or as long as a week. There is usually cargo to discharge, and if the *C. D. Howe* is the only ship of the year to call, it must bring whatever is needed to ensure life in reasonable comfort for the community till next ship-time. There is oil in endless drums, lowered from deck to barge, from barge to shore, and then rolled laboriously up the beach above the high-tide mark. There are wooden packing cases to be discharged, each painted with distinctive

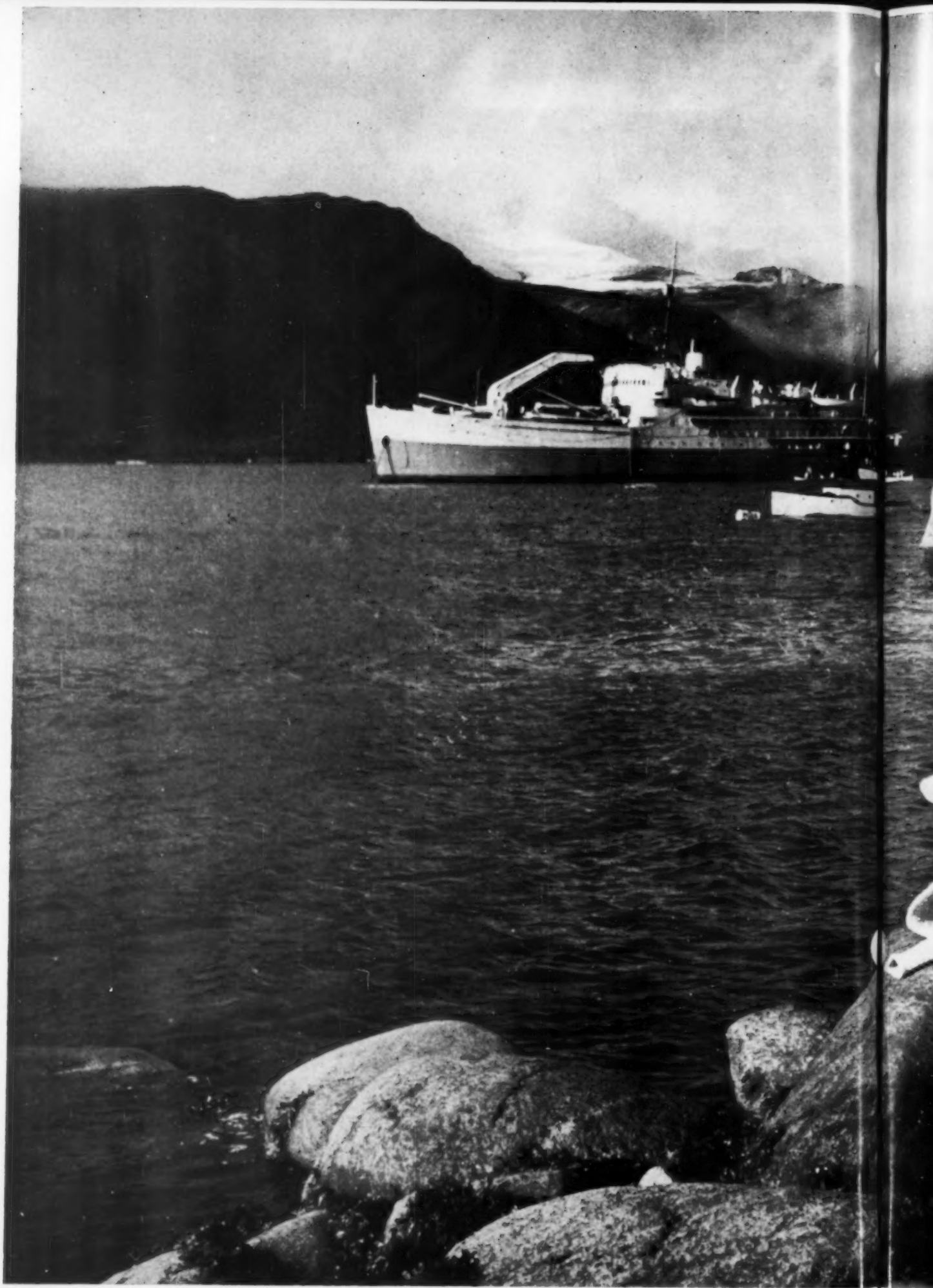
bands to indicate its particular Arctic destination. Within them may be food, clothing, a filing cabinet, or even a refrigerator.

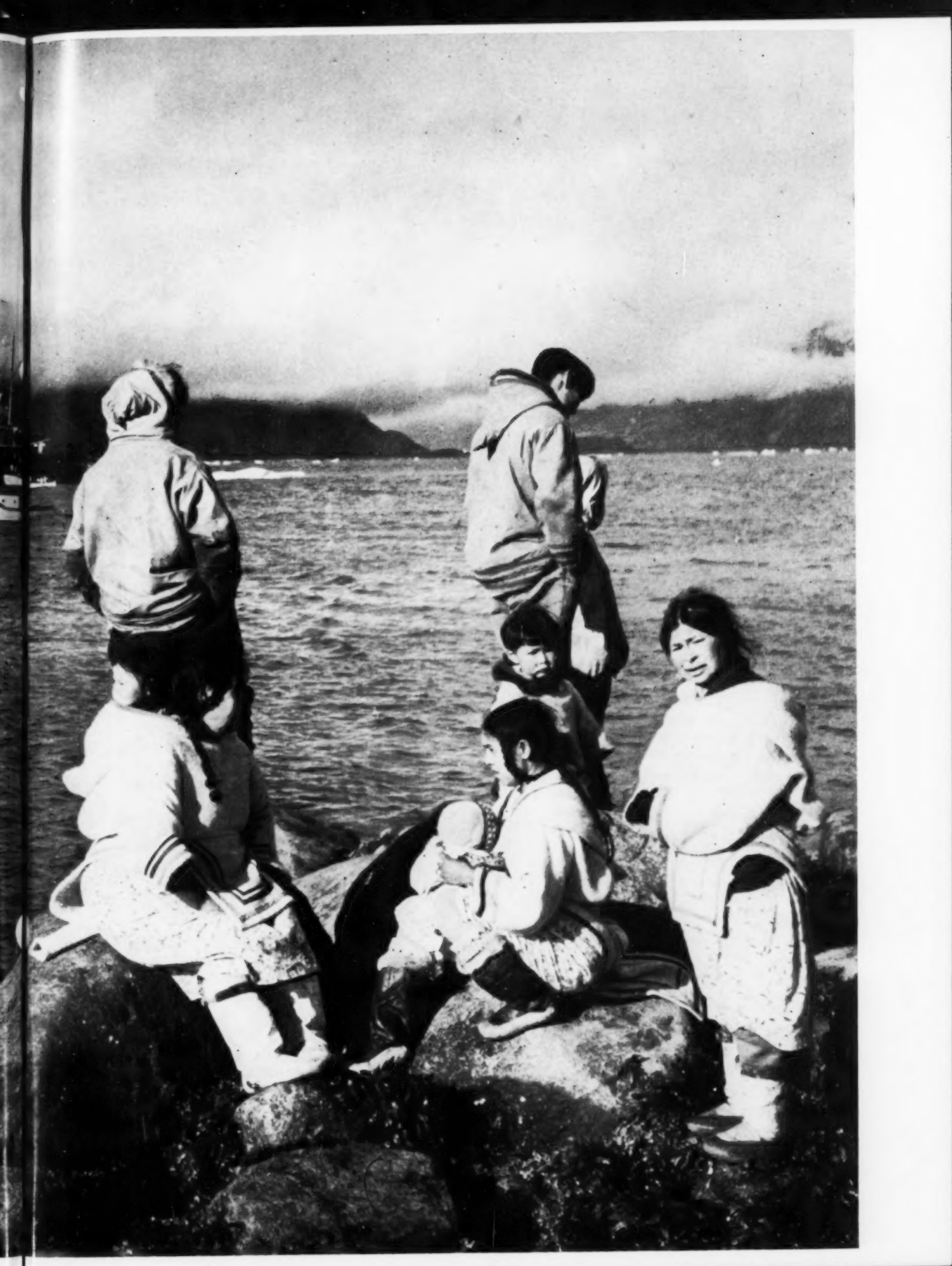
The biggest task of all, however, is not the cargo, but the medical survey. This is usually carried out on board. The ship's anchor has scarcely dropped when boatloads of Eskimos in their Peterheads, whale boats or skiffs pour across the water to the ship's ladder, and go straight to the medical quarters. Trial and error over the years has evolved a thorough and efficient system and the Eskimos are eager to co-operate. First comes the registration, then the X-rays for tuberculosis, followed by the physical examination in the operating room. By the time this is over, the X-rays are developed and read—a great improvement on the old system when neither patient nor doctor knew until next ship-time whether or not there were active and infectious cases at large. The dentist comes next and finally the immunization programme. Then there is a display of health films, travelogues, tape-recorded messages from relatives in hospital and photographs to be given out of those who are now convalescent. The Eskimos in turn hold the microphone and watch the slowly turning spools which will in some mysterious fashion connect them with those who have gone outside to get well. Family groups in their best parkas stand proudly by the mast for portraits that will be taken to hospital patients. Through it all there is tea, gallons of tea, and a box lunch for each man, woman and child. Meantime, the postmaster will be going over the local postal records, usually kept by a member of the Royal Canadian Mounted Police.

The school inspector will be visiting the federal day-school, if there is one, or may be discussing teaching with the missionary who gives instruction to the children in the absence of a full-time teacher. The hydrographer will have set out with his crew of two in the *Grebe*, a hydrographic survey boat, to take soundings and to plot charts. The senior medical officer will go ashore to study public health problems. The Air Force officer will be briefing the local representative of the Ground Observer Corps, often the manager of the Hudson's Bay Company post. There will be a parade of Canadian

Photograph on pages 196 and 197

Something of the drama attending the once-a-year arrival of the patrol ship in the Eastern Arctic has been caught by the artist-photographer in this view of the Canadian supply ship C. D. Howe at Pangnirtung, Baffin Island.







Eskimo children beside a summer tent at Ivugivik on the north-eastern shore of Hudson Bay.

R. A. J. Phillips



A group outside an Eskimo home at Ivugivik, one of the communities served by the Patrol.

Rangers, a band of irregulars, mostly Eskimo, enrolled to co-operate with the Canadian army. Their uniform is a red arm-band; their pay, a yearly allotment of ammunition and the use of a rifle. When the Ranger officer comes ashore, any convenient piece of flat ground becomes a parade square, and though there is not much drill, the annual inspection of men and equipment is both solemn and impressive.

The officer in charge of the patrol is responsible for the smooth running of the whole operation, and he visits every member of the permanent local community to talk over

immediate problems and long-range plans, to explain the current policy of the government and to listen to ideas for the solution of local problems or for the development of the Arctic.

In the evening the teacher, the trader, the missionary, the policeman and whoever else may be in town for ship-time come aboard for dinner. There are more exchanges of news and views. Perhaps someone on shore wants to have the motor on his boat fixed by a ship's engineer; a priest from Belgium or a trader from Scotland wants to take out papers for Canadian citizenship, despite the fact that all



An Eskimo family in their summer tent at Ivugivik on Hudson Bay.



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the Patrol.

R. A. J. Phillips



Cape Dorset Eskimos listen to tape recordings made by neighbours who are in hospital in the south.

he knows of Canada is the Eastern Arctic. Perhaps a member of the crew has bought a polar bear skin and needs a fur export permit to take it outside the Northwest Territories, or it may be necessary to make arrangements for the care of a family whose father is leaving with tuberculosis. Just when the ship is about to leave, someone may learn that an Eskimo accompanying it has left his belongings ten miles up the shore; the helicopter must speed to the rescue amidst intense excitement, and the flurry of departure. When the *C. D. Howe* raises anchor and blows the final salute, there

is always some regret and some relief. It is said that the day the ship comes in is the second-best day of the year; the best day is when she leaves and relative tranquillity settles on the land.

On board ship it is far from tranquil; there are reports and letters, preparations for the next port of call, anxious studies of medical reports and comparisons with the past. Sometimes now the patrol examines a whole community without finding disease requiring hospitalization: this is progress in human terms. It is the sort of milestone which makes

Examination of an Eskimo child during the Patrol's medical survey.

N.F.B.

199





An Eskimo komatik from Lake Harbour, southern Baffin Island, coming to meet the C. D. Howe. The harbour being frozen, the ship had to anchor about five miles outside. It was most unusual to have the ship met by dog team instead of boats.

R. A. J. Phillips



worthwhile all the time and money spent, all the loyal efforts of members of the patrol beyond the normal call of duty.

One of the happiest duties of the patrol is to take home those Eskimos whose ailments have been cured in hospital. They drop off happily in twos and threes along the route. Though the Eskimo is undemonstrative, a homecoming is a great moment to him; and to the administrators it is a sign of real progress in national health. It may sound discouraging to say that one Canadian Eskimo in ten is now in hospital, but it is sure evidence of the thoroughness of the modern medical work. When the sick ones return cured, the Eskimos'

Eskimos leaving the C. D. Howe at Sugluk on Hudson Strait.

R. A. J. Phillips



The entrance of Craig Harbour, southern Ellesmere Island, one of the ports of call of the Eastern Arctic patrol ship, C. D. Howe. The ship sails from Montreal in the third week of June every year and spends three months patrolling the Eastern Arctic.

confidence in the white man's ways is strengthened.

For three exhausting months the patrol continues. There are moments of relaxation. Sailing over the Arctic Circle has become a ritual as precious as crossing the equator, and there are other festivities. For the hardier souls there is swimming in water flecked with ice, or perhaps an Eskimo hunt for walrus or whale. Best of all is to leave the ship and tramp over the barrens. The landscape of the Arctic has been called an unwritten symphony. To stand amidst the majestic infinity of multi-coloured hills or to feel the passive beauty of the silent fiords of Baffin Island is rather like listening to overpowering music—and the sensation is as difficult to describe.

The land remains much as it was when

Frobisher first saw it in 1576, and still swallows up the little communities which have been dropped by the shores of the sea. But those communities are changing the life of the people. The administration is now catching up on lost centuries. The Eastern Arctic Patrol is no longer a voyage of exploration, to study islands and seas, flora and fauna, and the curious ways of an unknown people. Today the patrol is part of the accelerated process of Arctic development for the benefit of northerner and southerner alike.

It is a long time since the Eastern Arctic Patrol had to make sure that this land was Canadian. Now the patrol is trying to make equally sure that its people are able to share the benefits and responsibilities of the Canadian citizenship which they enjoyed so long only in silence and in ignorance.



A student rolls a watch pivot with a file-like instrument with teeth so fine they feel smooth. The process shapes, hardens and polishes the pivot. Pivots act as axles for watch wheels, their rounded ends turning against the jewelled bearings.

Swiss Watch School

by PAUL TSCHUDIN

FROM the arched window Max Wyss looked out at the pine-covered slopes of the Jura and to the Suze River plunging through a narrow gorge into the valley. "There you see a fair sampling of our resources", he said. "Some timber, water-power and lots of beautiful scenery. But that's all. If we had to depend on these, most of us would be starving. Instead, we depend on our skill—and we keep it alive in just such schools as this."

Mr. Wyss is the director of the Horological School of Bienne in the heart of Switzerland's watch-making region. Behind the school stands the old town of Bienne, a picturesque jumble of crooked streets and fancifully coloured houses dating back to the Middle Ages. Before it lies the new town, an almost symmetrical pattern of modern buildings. Few visitors recognize Bienne as an industrial centre, for there

are no noisy stockyards nor erupting chimneys. Its 101 watch-making factories, with their carefully tended lawns, can hardly be distinguished from the surrounding apartment houses and schools. Yet they are closely linked with the town's prosperity: nearly ninety per cent of Bienne's 55,000 inhabitants are directly dependent on watch-making for their livelihood.

"It is no secret that Swiss watch-makers are better paid than any comparable group of workers in Europe", Mr. Wyss told a visitor. "One reason is the complexity of the watch itself. Here you have an instrument which must have extreme endurance and at the same time almost infinite precision. A watch runs on only one one-hundred-thousandth of a horsepower, yet it must work for years without stopping. One of its parts, the balance-wheel, oscillates

18,000 times an hour. In twenty years its rim travels a distance equal to three and a half times around the earth. Some parts are measured to a tolerance of one-thousandth of a millimetre. That's one-twentieth the thickness of a cigarette paper. Some of the screws used in a watch are so minute that they look like specks of dust. Fifty thousand of them can be poured into an ordinary thimble. But if you examine one under a microscope, you will see that its head and threads are carefully ground and polished."

Another reason for the watch-maker's high pay is the length and thoroughness of his training. It takes as long to become a watch-maker as it does to earn a university degree. Most workers, including horologists, tool-makers and draftsmen, devote four years to special studies before they are qualified for watch-making posts. Technicians who help bring new models into production study for five or six years. Even the *régleurs*, the men and women who perform the delicate and specialized work of attaching the hairspring to the balance-wheel, must spend two years at a horological school.

Before a student is accepted in the Bienne school, he must pass an entrance examination

in mathematics, drawing, physics, composition and languages. Then he takes a nerve-racking psycho-technical test to prove his aptitude for high-precision work. To measure his dexterity, for example, he is given a metal plate with pin-point holes, a pair of tweezers, a small screw-driver, and a container of screws the size of uncooked grains of rice. While the test is being timed, he must pick up each screw with the tweezers, place it in one of the holes and turn it in. To test his powers of concentration, he is given an instrument with a metal pencil mounted on two arms, each of which is connected with a wheel. The pencil is moved forward by turning one wheel and sideways by turning the other. The problem: to draw a perfect circle by turning both wheels simultaneously.

"By the time the applicant has finished a few more tests like these", Mr. Wyss said, "we know pretty well whether he can learn to do high precision work. We also know a good deal about the state of his nerves."

If the student passes these tests, his work for the next four to six years is clearly laid out. He will take forty-five credit hours a week, one third of them in the class-room and the rest in the workshop. The theoretical studies required

An outsize model is used by an instructor to show a student the movement of a jewelled-lever watch. He had to stand on a chair to reach the winding stem, which is the size of a grape-fruit.



of a watch-maker cover a wide range — all branches of mathematics, languages, physics, chemistry, mechanics, law, accounting, mechanical drawing, even astronomy. In the workshop he not only makes an entire watch from mainspring to jewelled-lever, but learns to make all the tools needed to produce it. To give a more graphic idea of what this means, Mr. Wyss took a single watch part, the barrel-bridge, put it on one end of a long table, then covered the table with the tools made specially for its manufacture — stamps, cams, gauges, gravers — seventy-five pieces in all.

"These are the tools needed for one part, mind you", he said, "and it is by no means the most complicated. The average jewelled-lever watch has more than 150 different parts. Some of the more complex chronographs made by our students have 300. If I were to show you all the tools required for a whole watch, it would take more floor space than we have in the school."

Some students find that adjustment to the watch-making routine is nearly as difficult as the work itself. Talking among the students is discouraged; smoking in the work-rooms is

strictly forbidden; no flowers, fruit nor food of any kind are allowed inside. When students arrive in the morning they must change their shoes for clean slippers and cover their street clothes with smocks. These rules are not the idle whim of a teacher; they have been laid down by the watch-makers themselves. Talking is frowned on because the moisture of the breath can have a disastrous effect upon a watch-movement. Smoke and the odours of flowers or food can ruin fine lubricating oils. And a speck of dust falling into a watch from street clothes can be as destructive as a monkey-wrench in a gear-box.

In the workshop the student proceeds gradually from the simple to the complex, sharpening his eye and refining his touch as he goes along. His first job is filing to exact measure the wooden vice-block he will use throughout his training. From wood he turns to metal, laboriously fashioning every tool he will need — punches, rules, calibres and spindles. Once he has a collection of tools, he begins making the watch itself, starting with the relatively simple back-plate and proceeding to such delicate work as the pivot — the tiny axle of the watch-wheel.

To an unpractised eye, a student performing the *pivotage* seems to be working on thin air, for the hair-size pivot turning in the lathe is virtually invisible. After it has been turned, the pivot is rolled with a file-like instrument so fine that it feels smooth to the touch. Small as it is, the pivot must be perfectly formed with rounded end and sharply defined shoulders, so that when inserted in the watch it turns against the jewelled bearings with an absolute minimum of friction and wear. The nearer perfect the pivots, the longer the life of the watch.

As his schooling progresses, the student becomes familiar with the ultra-precise machines that will help him make the watch. Among them are the vibrograph, which takes a kind of cardiograph of the watch, recording its beat on a graph to show whether it keeps true time; the electric microscope, which blows up a tiny watch-wheel to the size of a locomotive gear, showing each perfectly machined tooth; a weighing scale so fine that it can be thrown off balance by changes in room temperature; and



The regulating machine is used to adjust the hair-spring. The slightest variation in the spring will affect the watch's accuracy.

a jig-boring machine precise enough to split a hair into fifty equal parts.

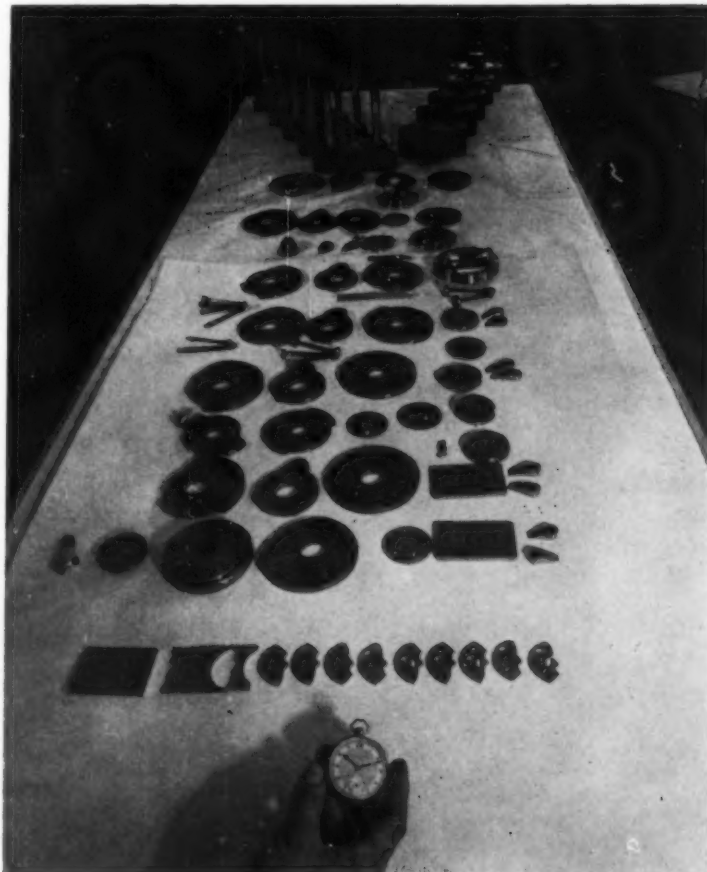
"With such machines available, you may wonder why we concentrate so heavily on hand work", Mr. Wyss said. "The answer is first that the only way a watch-maker can get a feeling for real precision is through constant manual practice. Secondly, no worker can fully understand the operation of a machine unless he can do the same work without it. Finally, some of the most precise work in watch-making can be done only by hand."

One operation for which a machine has never been devised is the delicate finishing of the watch. The mounting of the hairspring on the balance-wheel is particularly difficult because the slightest variation in the curve of the spring, its tension or length will throw the watch off by many minutes a day. But probably the most difficult task of all is assembling the vital parts and the *mise en marche*, which is a little like starting the breathing of a new-born baby. The balance-wheel, the jewelled-lever and the escape-wheel must all be synchronized and set in motion so that each acts and reacts exactly as it should with the other, assuring the smooth, faithful running of the watch.

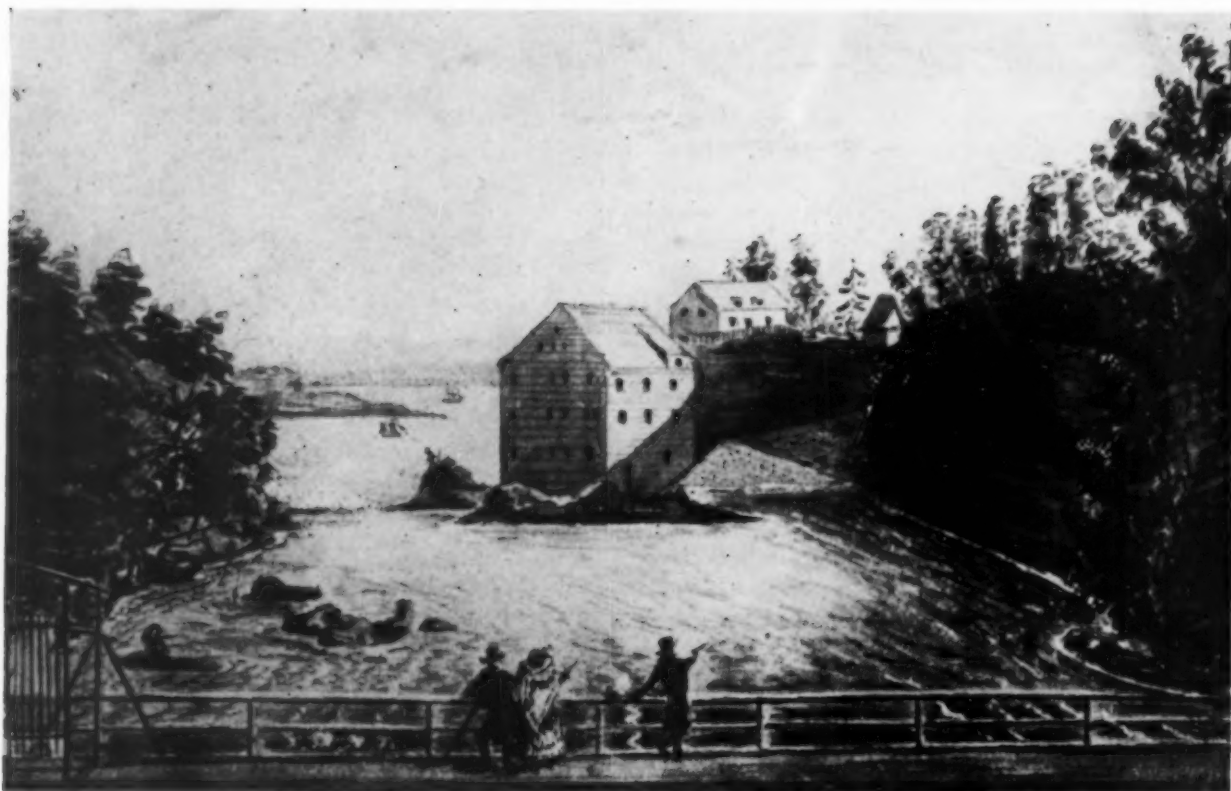
About the time the student is learning this process he may be getting his first offers of employment. Manufacturers begin to examine and select students as much as a year before graduation and frequently the young watch-maker receiving his diploma has a half-dozen positions from which to choose. His pay will be exceptionally high by European standards and will allow a living standard comparable to that of the American worker.

"In my case", Mr. Wyss said, "wages are only part of the story. The Swiss watch-maker seems to take real pleasure in his job. Partly it is because he realizes its importance — watches literally buy much of the food we have to import. But he also has a genuine pride and interest in workmanship. I know many watch-makers who spend their evenings repairing their neighbours' clocks."

This may well be so. Mr. Wyss himself, according to his students, spends more time at the work-bench and the designing-board in his office than at his desk.



Above the chronometer are its barrel-bridge in different stages of production — and all the tools used to make that one part.



The Grenville Canal area at the time of the canal's construction, about 1819, by an unknown artist.

Historic Argenteuil County

by W. E. GREENING

ONE of the most attractive regions of Southern Quebec is Argenteuil County, which is located almost mid-way between the cities of Montreal and Ottawa along the north shore of the Ottawa River. It extends northwards from this water-way through a belt of farming country into the region of lakes and forests which forms the southern edge of the Laurentian Plateau in the vicinity of such resorts as Weir and Arundel. The eastern end of the county is traversed by the attractive North River which rises in the Laurentians near Val Morin and Ste. Marguerite and follows a circuitous course southwards and then westwards through St. Jérôme and Lachute and finally merges with the Ottawa River near the village of St. Andrews East. The stretch of the Ottawa River along the southern boundary of the county is picturesque in the extreme with two

sets of rapids, the Long Sault located between the towns of Grenville, Quebec and Hawkesbury, Ontario, and another at Carillon and Point Fortune, Quebec about twelve miles to the east.

This region of Quebec has historical associations with the French regime. It was through this stretch of the Ottawa River that the big flotillas of canoes laden with fur traders and their merchandise and supplies would pass every year in the seventeenth and eighteenth centuries on their way to and from the trading posts in the wilderness of the interior of the continent.

The region around Carillon, about forty-five miles west of Montreal, was in 1660 the scene of the heroic stand made by the young French soldier, Adam Dollard Des Ormeaux, and his little band of companions against a much

larger force of Iroquois. This combat has become one of the great national epics of French Canada. Its anniversary is celebrated as a festival every year in the towns and the cities of the Province of Quebec.

There has been a good deal of controversy in recent years about the exact site of this battle. An archaeological expedition which was sent out by the National Museum of Canada in 1952 discovered remains of an Indian stockade which might have been used by Dollard and his men at Greece's Point on the south side of the Ottawa River about ten to twelve miles west of Carillon.

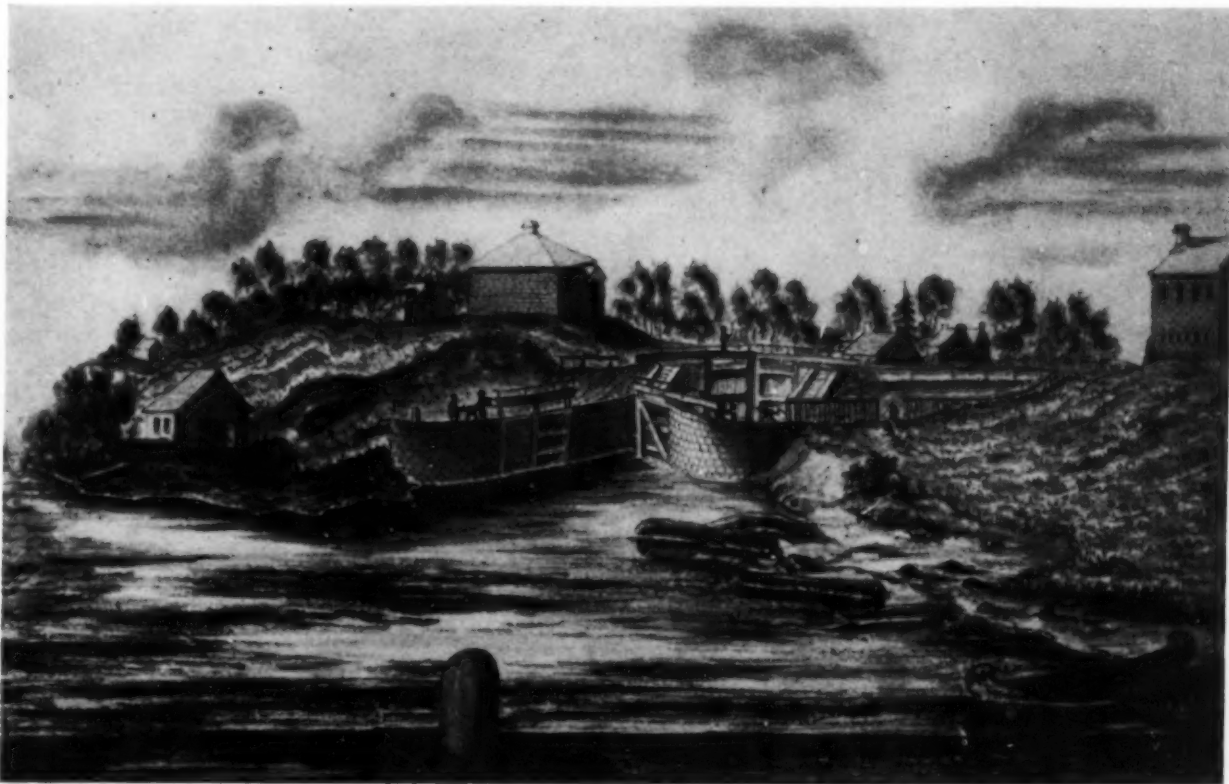
Argenteuil was one of the most westerly of the seigniories granted by the French Government to prominent residents of New France during the latter part of the seventeenth century. In 1682 the French Crown gave Joseph d'Ailleboust a vast tract of forest wilderness in this region which extended for about seventy miles along the north bank of the Ottawa River and a considerable distance inland. During the remainder of the French regime in Canada, however, most of this territory was neglected,

probably through dread of Indian attacks.

After passing into the hands of the Panet family, a large part of this seigniorship was eventually bought around 1815 by another family very prominent in the annals of Canada — the Johnsons. Sir William Johnson had been an important figure in the history of the upper region of the colony of New York before the American Revolution, with a large semi-feudal domain on the Mohawk River west of Albany. His son, Sir John Johnson, was one of the leaders among the United Empire Loyalists. In 1783 he was given the influential post of Superintendent-General of Indian Affairs for British North America. When he acquired the seigniorship at St. Andrews East, he built a large house there which is supposed to have been a replica of the original Johnson chateau in the Mohawk Valley. Unfortunately, this was destroyed by fire in the nineteenth century. Today the estate forms parts of the St. Andrews East golf course.

During the years after the American Revolution, settlers began to come into this region of Lower Canada both from Scotland and from the New England States to the south. Sir Wil-

The entrance of the Carillon Canal, as seen by the artist, William Austin, in May 1854.

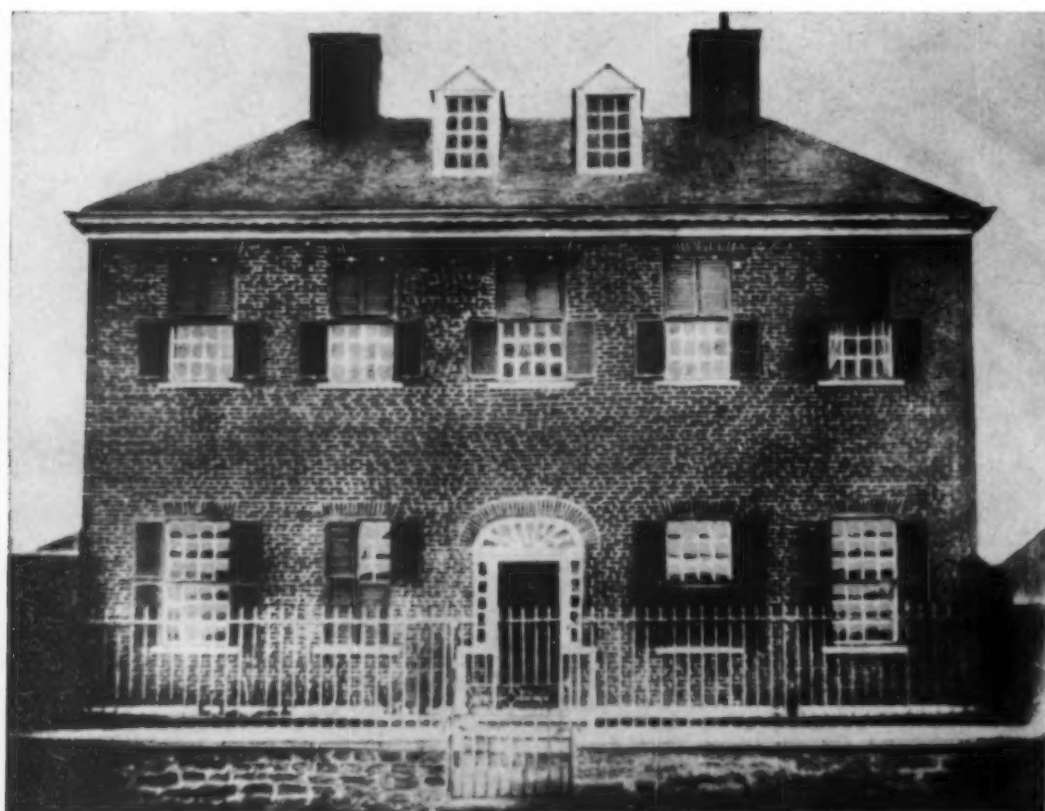




liam Johnson brought in quite a few United Empire Loyalists from New York State. Retired British army officers and merchants engaged in the fur trade bought properties along the Ottawa River and a flourishing community grew up at St. Andrews East on the North

River about two miles above its junction with the Ottawa River. This predominantly English-speaking and Protestant community formed a strong contrast to the French-speaking Roman Catholic settlements to the east along the Lake of the Two Mountains. Indeed, it had much more in common with the region immediately to the south and the west on the other side of the Ottawa River, which was also largely settled by Scottish people and by Sir William Johnson's United Empire Loyalists, particularly in the district around Glengarry and Cornwall.

As was usually the case, one of the first concerns of the Scottish settlers at St. Andrews East was the erection of a fitting place of worship. The Presbyterian church in this village, which was completed in 1818, is one of the oldest churches of this denomination in Lower Canada, and is a charming and unaffected example of nineteenth century Protestant architecture. During the same period, the Johnson family provided the funds for the construction at St. Andrews East in 1819 of what is now one of the oldest Anglican churches in the Ottawa River Valley and one of the oldest stone churches still in continuous use in the



The house of Sir John Johnson, a prominent United Empire Loyalist leader, at St. Andrews East, Quebec.

Province of Quebec. (However, there are older wooden ones in the region of the Richelieu River near the American boundary which are still used as places of worship.) The interior of this well-preserved edifice is interesting, with its seigniorial pew at the back designed for the members of the Johnson family.¹

St. Andrews East also deserves mention as the birthplace during this period of one of Canada's largest and most important industries. About 1800 a New Englander named Walter Ware, who had had some experience of paper-making in small mills at Newton near Boston, Massachusetts, came northwards to Montreal and decided to utilize the power in the falls of the North River at St. Andrews East for the construction of a paper-mill, the first in Canada.

This mill, a two-storey building, according to contemporary accounts, must have been very primitive by present-day standards. It is quite probable that most of the operations in the mill were done by hand. Since the mechanical process for the transformation of wood into pulp was not yet in existence, rags were the

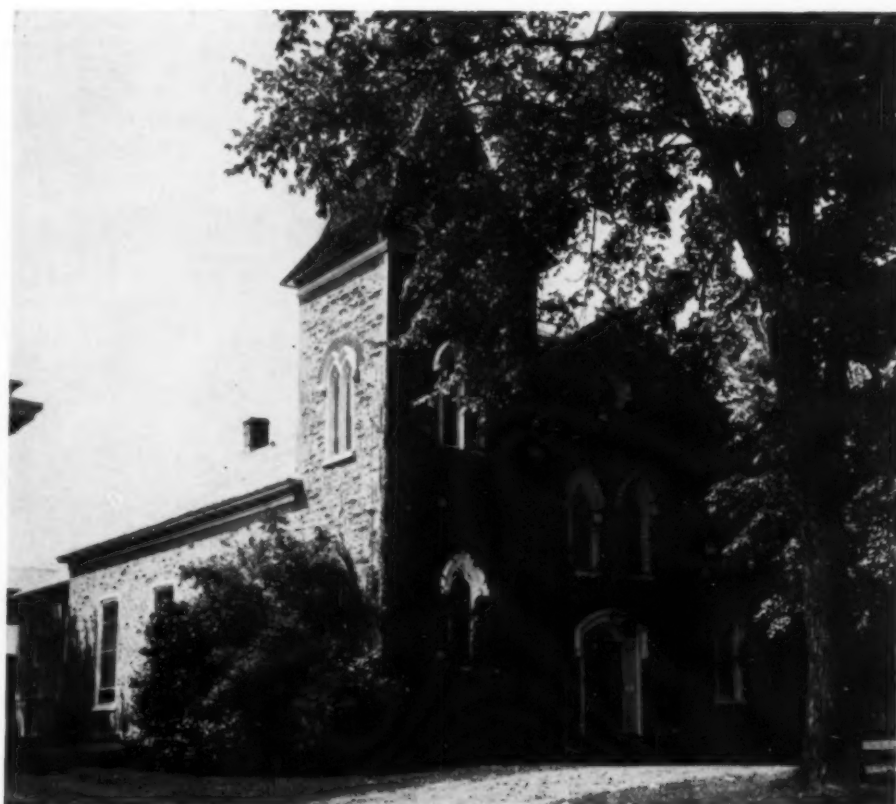
¹ The Protestant Chapel at Berthier En Haut, which was built in the 1780s, has long since ceased to be used as a place of public worship.



The memorial to Adam Dollard Des Ormeaux and his companions, who perished in 1660 while fighting a large band of Iroquois Indians near Carillon.

The Presbyterian church, built at St. Andrews East in 1818, is one of the oldest in Quebec.

209

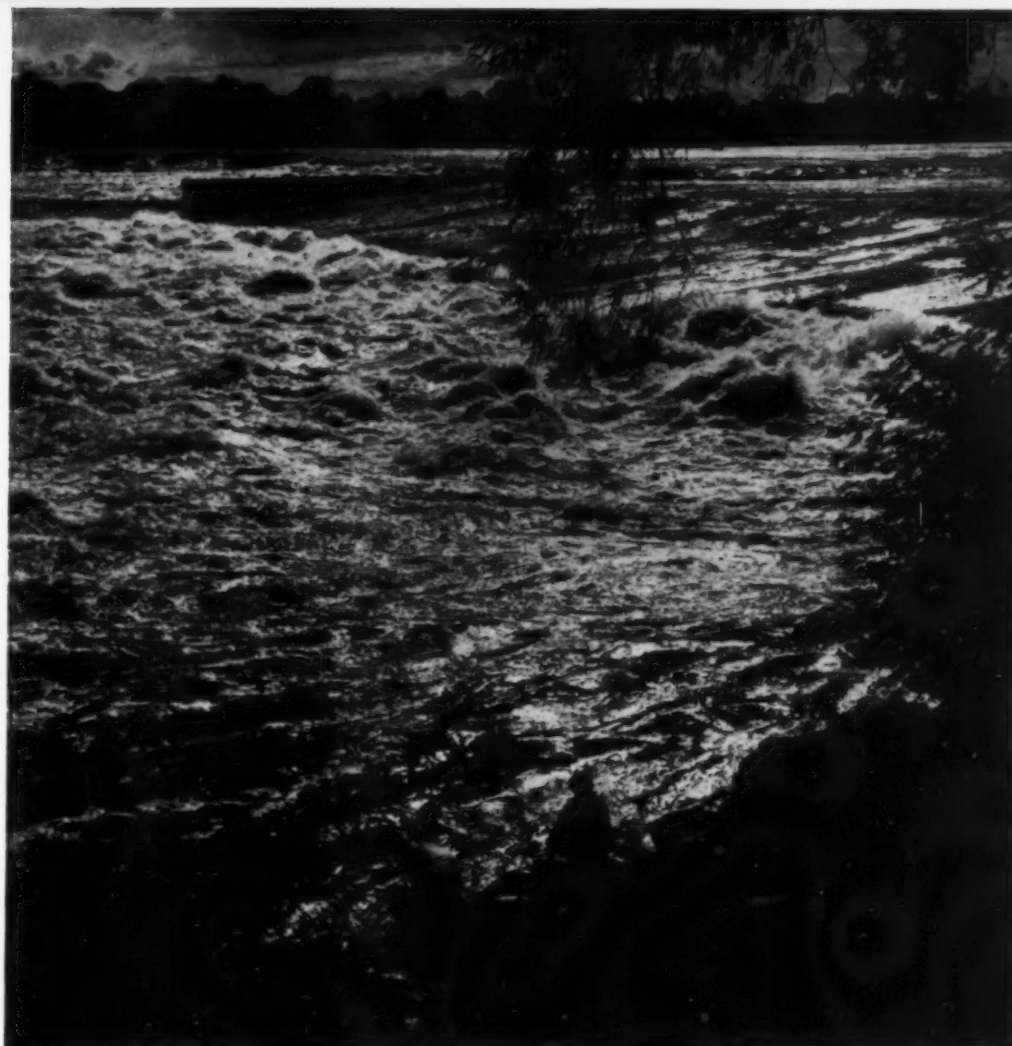




*Above:—
The canal between
Carillon and Gren-
ville in Argenteuil
County. It was com-
pleted in the 1830s.*

*The entrance to
the canal at Caril-
lon.*

The foaming water of the rapids at Carillon. The canal was built so that ships could pass in safety.



sole material used for the manufacture of paper in this period. The only piece of machinery was a Hollander machine, which was employed for slicing the rags and beating them into pulp. The pulp was then dipped by hand into large moulds and the water was shaken out until a sheet of paper was formed. The paper was hung on rods in the loft of the mill to dry. This mill produced writing paper, wrapping paper, stationery and the stock for a newspaper printed in Montreal, called the *Canadian Gazette*, which was a predecessor of the present *Montreal Gazette*. It was owned and operated by a prominent local bookseller and stationer, P. Brown. All the paper produced in the mill was shipped by flat-boat down the Lake of the Two Mountains and Lake St. Louis to Montreal. Probably the total year's output of this mill would be less than a few hours' production by the enormous and speedy newsprint machines

in one of the great modern mills in Northern Quebec or Ontario.

This mill continued operation as late as 1834. Even though all trace of it has long since disappeared, its site in the centre of the village of St. Andrews East is commemorated by a cairn and a plaque, erected by the Historical Sites and Monuments Board of the Canadian Government.

After the War of 1812, the villages of St. Andrews East and Carillon, about two miles to the west on the Ottawa River, assumed a good deal of importance from the commercial standpoint. In 1819 the British Government decided to build a series of canals around the rapids in the Ottawa River at Grenville, Chute-à-Caron (now Caron) and Carillon as part of an inland navigation system from Montreal through Bytown (Ottawa) and the Rideau Lakes to Kingston. A corps of Royal Engineers, sent out from



A nineteenth century residence at St. Andrews East.

England, began the construction of these canals, which were finally finished in the early 1830s. With the completion of the canals connecting Lake St. Louis with the Lake of the Two Mountains during the same period, navigation became possible between Montreal and Bytown. During these years, a handsome grey stone building in the Georgian style and with a fine fan-shaped portico was built at Carillon close to the Ottawa River as a residence for the corps of Royal Engineers who constructed the canals and afterwards guarded them during the political disturbances in Lower Canada in 1837 and 1838.

The first pair of canals at Carillon and Grenville soon became too small and narrow for the growing volume of traffic up and down the Ottawa River and, later in the century, they were replaced by larger ones which are still in use. Both the canals and rapids at Chute-à-Caron, about mid-way between Caril-

lon and Grenville, disappeared when a dam was built at Carillon about the middle of the century raising the level in this stretch of the river. The completion of these canals gave an impetus to the development of the lumber trade on the Ottawa River and great rafts descended the water-way every summer. A lumber-mill was built during this period by the Hawkesbury Lumber Company on an island in the Ottawa River between Grenville and Hawkesbury. Its picturesque ruins are still visible there.

The first steamer to provide service between Montreal and Carillon through the Lake of the Two Mountains, the *William King*, was built in 1826. A year later another, called the *Saint Andrew*, began a service between Montreal and Point Fortune, across the river from Carillon on the boundary between Quebec and Ontario. In the following decade the Ottawa and Rideau Forwarding Company was formed in Montreal

to start a combination steamer and stage route between Montreal, Bytown and Kingston. The passengers would take the steamer as far as Carillon, go several miles by coach, then transfer again to a steamer at Grenville which would take them the rest of the way up the river to Bytown. In 1854 the coach link was replaced by a narrow-gauge railway with wood-burning engines, called the *Carillon and Grenville*, built for the purpose of transporting steamer passengers between Montreal and Bytown around this stretch of the Ottawa River. This line was bought by the Canadian Northern Railway Company at the beginning of the present century and became part of its route from Ottawa and Hawkesbury into Montreal through the tunnel under Mount Royal. Eventually a steamer service was set up through the Carillon and Grenville canals between Montreal and Ottawa. It continued to operate until well into the twentieth century.

Several interesting and unusual figures were connected with this region of Lower Canada during this era. Prominent in this group was the British military man, Charles James Forbes. Born in 1786, he had a very adventurous career as a young man. After seeing service with the British Navy in the Mediterranean during the Napoleonic Wars, he was imprisoned in Cairo and later served with General Pakenham at the Battle of New Orleans in 1815. After the war he came out to Canada and, like the Johnson family, bought a large tract of the original seignior of Argenteuil in the vicinity of Carillon, where he laid out for himself a very elaborate estate with a stone manor house on a hill overlooking the Ottawa River. He lived at Carillon for many years in true baronial style, entertaining many prominent visitors, including most of the governors of Canada during this period. His house is still standing but in recent years it was bought by a Roman Catholic order

This house, built at St. Andrews East in the nineteenth century, was formerly an officers' club.





The Historical Museum of Argenteuil County at Carillon. During the nineteenth century the building served as a barracks for the Royal Engineers.

which transformed and remodelled it to such an extent that its original form is practically unrecognizable.

Another family which lived in the region around St. Andrews East in the latter part of

the nineteenth century and had considerable importance was the Abbotts. The Reverend Joseph Abbott was the first rector of the Anglican church there and his son, Sir John Abbott, was a very prominent lawyer and political figure in Montreal. He was Solicitor-General of Canada in the Cabinets of the Macdonald administrations after 1828 and was Prime Minister for a short period after the death of Macdonald in the early 1880s. His daughter, Dr. Maude Abbott, who was also identified with St. Andrews, was an important medical research worker at McGill University in Montreal and an historian of the medical profession in Montreal.

After the middle of the nineteenth century, with the coming of the railways and the decline of water-borne commerce along the Ottawa, the region of Argenteuil County around St. Andrews East and Carillon gradually lost its commercial importance. The line between Montreal



The entrance hall of the Historical Museum of Argenteuil County.

and Ottawa along the north shore of the Ottawa River which today forms part of the Canadian Pacific Railway system and which was built in the 1870s, bypassed this district and took a more direct route through Lachute, several miles to the north on the North River. This community was founded about the same time as St. Andrews but only began to take on importance after the beginning of the present century. Today it is the commercial and business centre of the county, with textile and silk mills.

The region around Lachute is also important as one of the early centres of the chemical and explosives industries in Eastern Canada. The Nobel Explosives Company, which was formed in Glasgow in 1871 to export dynamite and explosives to Canada, built a storage magazine at Carillon. But this was considered to endanger traffic in the canal there, so the plant was moved northwards to the village of Brownsburg near Lachute. From this plant came much of the dynamite which was used in the extensive blasting operations in connection with the construction of the Canadian Pacific Railway's trans-continental line in the region north of Lake Superior and in the Rockies. In 1886 Captain R. L. Howard, a veteran of the Northwest Rebellion, built one of the first cartridge plants in Canada at Brownsburg. This was later acquired by Canadian Industries Limited and became one of its chain of plants across Canada.

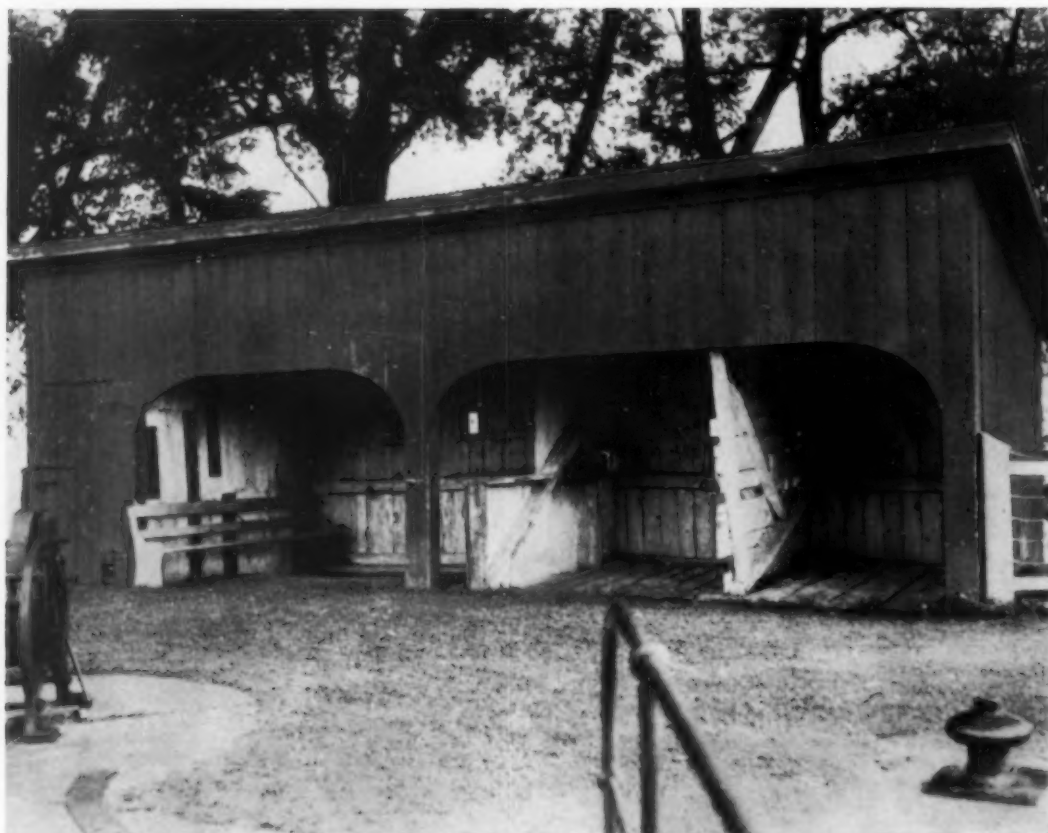
The Historical Society of Argenteuil County, within the past few years, has come into possession of the former barracks of the Royal Engineers built at Carillon early in the nineteenth century, and has transformed it into an admirable regional historical museum. Its spacious and high-ceilinged rooms contain many interesting items connected with the history of this region of Quebec during the past two centuries, including Indian relics, typical nineteenth century Canadian furniture, mementoes of the Abbott family, and many exhibits which have to do with the early history of steam navigation and railway construction along the Ottawa River. Not far from the museum on the banks of the Ottawa River stands a fine statue by the well-known French Canadian sculptor, Alfred Laliberté, which was erected in 1919,



One of the old fireplaces in the museum. Around it are various household utensils used in the early days.

commemorating the heroic deeds of Dollard and his band in this region almost three centuries ago.

Carillon is still a very attractive and picturesque spot, with its turbulent foaming rapids and its placid canal, where there is little boat traffic today. It is bordered by a line of tall elm trees reminiscent of those along the water-ways of France. The vista eastwards down the river towards the Lake of the Two Mountains, with the hills behind Rigaud visible in the distance, is a truly lovely one on a bright summer's day. It is a pity that some of this beauty is fated to disappear in the near future because of the decision of the Hydro-Electric Power Commission of Ontario, in co-operation with the Quebec Government, to construct a big power-house and a dam across the rapids in the Ottawa River to Point Fortune on the south side.



The old stables at the canal lock in Carillon.

Nearby St. Andrews East is also a charming and secluded community, where much of the atmosphere of the past lingers. Several houses which were built in the early part of the nineteenth century when it was an important centre in Lower Canada still border its shady streets. Especially interesting are the little Anglican and Presbyterian churches, to which reference has already been made, and also a stone house on the opposite shore of the North River which was built in the 1820s and used by the officers in the garrison at Carillon as a club. Another very attractive house in this vicinity has a portico of white columns in the classical style, an architectural feature which is not common in this part of the province. Altogether, there

are few regions of Southern Quebec so easily accessible both from Montreal and Ottawa which better repay an extended visit.

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The C.I.L. Oval.

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* * *

Photographs courtesy of the Public Archives of Canada and the Lausanne Studio.

EDITOR'S NOTE-BOOK

Dr. O. E. Ault (*The Gold Coast — Ghana*), Director of the Planning and Development Branch of the Civil Service Commission in Ottawa, spent three months in Ghana as head of a United Nations technical assistance mission advising on the reorganization of Ghana's civil service for the change-over to self-government. Dr. Ault has taken an active interest in adult education for many years. During the Second World War he served overseas as Army Educational Director and as Dean of Khaki University in England in 1945.

* * *

Malak (*Tulip-Time in Ottawa*) is a well-known professional photographer who lives in Ottawa. He has a keen eye for the beauty of the city's floral displays and many of his studies of tulips and other spring flowers are reproduced in magazines and newspapers.

* * *

R. A. J. Phillips (*The Eastern Arctic Patrol*) is Chief of the Arctic Division of the Department of Northern Affairs and National Resources in Ottawa. For nine years, following military service abroad during the Second World War, he served with the Department of External Affairs.

* * *

Paul Tschudin (*Swiss Watch School*) is Director of the Swiss Watch Service in New York. He is a native of Switzerland and an authority on Swiss watches.

* * *

W. E. Greening (*Historic Argenteuil County*) is a freelance writer who lives in Montreal and specializes in articles concerning the history and character of regions of the Province of Quebec.

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In the field of transportation there are many signs of efforts to encourage travel by improving facilities. Besides extending international air services, West Germany has introduced direct non-stop flights between various cities within her borders. This spring the Berlin-Paris express train resumed full service. For the convenience of tourists entering the country from the Netherlands and England, this summer an express train will be operated from Hoek van Holland by way of Osnabrück to Goslar and Harzburg Spa. Travellers going from Cologne to Düsseldorf are to be permitted to use portions of their railway tickets for travel on Rhine River boats along certain sections of the route. A new 20,000-ton ship, the *Arosa Sky*, is entering the trans-Atlantic service this month. From the mainland at Cuxhaven to resorts in Heligoland and on the island of Sylt in the North Sea a small new vessel known as the *Bunte Kuh* (Checkered Cow) is to be operated.

During the summer Touropa, a motorcoach company of Frankfurt-on-Main, offers two tours of West



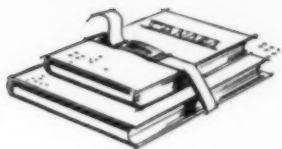
Ems Spa in Germany's Lahn River valley.

German Tourist Information Office.

Germany—one of the north, the other of the south, both lasting seven days. Their prices, \$89 and \$97 respectively, include transportation, hotel accommodation, meals, sight-seeing and entrance fees, and the services of local English-speaking guides. Those who cannot accompany the tours for the full seven day may join them for five days at reduced rates. The main stops on the southern journey are Würzburg, Bayreuth, Nürnberg, Rothenburg, Augsburg, Munich, Garmisch-Partenkirchen, Oberammergau, Konstanz, Baden-Baden and Heidelberg. On the northern tour, which includes a boat trip on the Rhine, visits are made to Goslar, Hanover, Hamburg, Reeperbahn, Lübeck, Bremen, Münster, Düsseldorf, Cologne and Coblenz.

There is not space enough here to do any more than suggest what awaits the person visiting the country for the first time. Romantic Rhine castles and ivy-grown university towns are on the itineraries of most of the tours organized by travel agents and transportation companies. The thousand-year-old city of Winkel, with its crooked lanes and old gabled buildings, perhaps may serve as an example of what lies off the beaten track. Here may be seen the "Grey

(Continued on page X)



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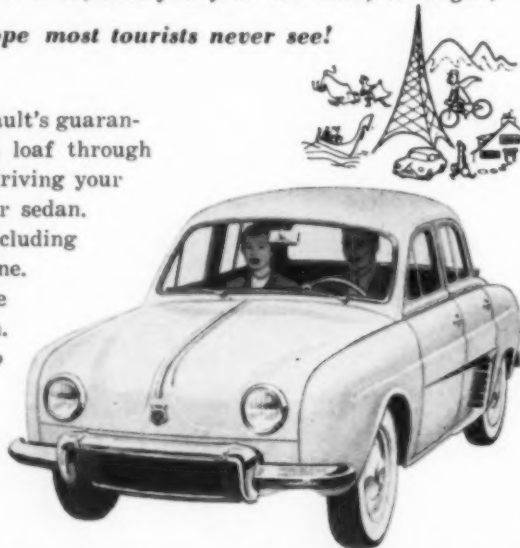
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(Continued from page VIII)

House", believed by German scientists to be the oldest house in Germany. Built about A.D. 850 by an archbishop of Mainz, it is still in use. Here, too, is found Brentano House where Goethe spent many happy hours. And there is also a moated castle—Schloss Vollrads.

Those who enjoy motor races will find distraction enough at the Nürburgring in the Eifel Hills between the Rhine and Mosel Rivers, where a number of automobile and motorcycle races will take place. The first important event, on 26 May, is the international ADAC (General German Automobile Club) 1,000-kilometre race for sports cars. This will be followed (30 May-1st June) by the International Rallye Wiesbaden and on 30 June by the international Eifel races for automobiles and motorcycles. On 4 August racing cars will compete for the Grand Prize of Germany (scoring for the world championship). On 25 August there will be an ADAC Rhineland race for motorcycles and on 6 October an international Rhineland race for automobiles. Some of the best drivers in international racing circles will participate in these races.

Elsewhere there will be a variety of

entertainment of a different kind. Heidelberg, for instance, will have concerts, theatrical performances, art shows, illuminations of the famous castle, and serenades in its courtyard, and fireworks displays. On certain dates between 29 June and 28 July Shakespeare's *A Midsummer Night's Dream* will be presented. At Wurzburg, amid baroque surroundings, a Mozart festival will be held 15-20 June. The program includes orchestral concerts, choral singing, and concerts of sacred music and chamber music. In Munich an opera festival will be held 11 August-10 September, at which Paul Hindemith will conduct the performance of his latest opera, *Die Harmonie der Welt*. In Berlin 21 June-2 July there will be an international film festival.

Further information about accommodation, transportation and special events in West Germany may be obtained from the German Tourist Information Office, 1176 Sherbrooke St. West, Montreal.

Flin Flon Trout Festival

Flin Flon, Manitoba, will hold its annual Trout Festival 28 June-2 July. There is a good road to the city and regular train, bus and air service. Immediately before the festival, the

Hudson Bay Route Association will hold its annual conference and convention in the city.

Pacific Travel Discounts

Agreements between Canadian Pacific Airlines and two ship-owning companies, Orient Lines and the Pacific Ship Owners Limited, provide for discounts of as much as ten per cent for round-trip fares from Vancouver to the Orient and Australia and New Zealand for passengers travelling one way by sea and one way by air. The Orient Line's ships sail from the west coast of this continent to Australia and New Zealand. The Nippon Yusen Kaisha (N.Y.K. Line) and American President Lines are members of Pacific Ship Owners Limited. The former operate passenger vessels calling at Vancouver, Yokohama, Kobe and Hong Kong; the latter sail from Vancouver and San Francisco to Honolulu, Japan, Hong Kong and the Philippines.



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Waterloo, Ontario, Centennial

This year the city of Waterloo, Ontario, is 100 years old. Celebrations to mark the occasion are taking place 26 June-1st July. Their highlights will be the Seventy-fifth Annual Band Festival (29 June) with numerous bands from many Canadian and United States cities taking part, and the annual Waterloo Folk Festival.

Australian Industries Fair

At Melbourne, Australia, the second Australian Industries Fair will take place 27 February-22 March 1958. It will be sponsored by the Victorian Chamber of Manufactures. Its aims are three: to acquaint Australians with local achievements in manufacturing, to promote the export of manufactured products, and to encourage overseas investment in Australia. Goods from abroad will not be displayed at the fair. Further information may be obtained from the Victorian Chamber of Manufactures, 312 Flinders Street, Melbourne.

AMONGST THE NEW BOOKS

Climatic Summaries for Selected Meteorological Stations in Canada

by C. C. Boughner, R. W. Longley and M. K. Thomas
(Meteorological Division, Toronto, 30c.)

Frost data from more than 1,350 meteorological stations in Canada are presented in this third volume of Climatic Summaries. Volume I, published in 1947, gave average values of mean and extreme temperature, mean and extreme humidity, sunshine, and precipitation for 405 stations in the nine provinces, the Yukon and the Northwest Territories. This was followed in 1948 by Volume II which presented data on humidity and wind speed at 183 stations in Canada and Newfoundland. Average values of temperature and precipitation for stations in Newfoundland and additional data from first order stations in the other provinces comprised the addendum to Volume I and was published in 1954.

Volume III provides an excellent companion to the summaries already published. The general picture of frost occurrence in Canada is given by six maps with isolines depicting the various regions of frost intensity. The dates of first and last frost under three headings: average, earliest, and latest, are listed in a table that comprises forty-three pages. Also included in this table are the average

frost-free period and the recorded extremes of the longest and shortest frost-free periods.

The probability of spring frosts, fall frosts, and frost-free periods is presented in tabular form followed by a table of average number of days with freezing temperature for 142 selected stations. Finally there are graphs for fifty-five stations showing the percentage frequency of dates of last spring and first autumn frosts by weeks.

Data on temperature are used by almost every industry in Canada. This report, however, is mainly concerned with periods free from freezing temperatures and as such is of prime interest to the agricultural industry. Even in this industry, the data must be used with caution because of the effect of local conditions on temperatures. This is recognized by the inclusion of a table that compares the temperature at screen height, four feet above the level of the ground, with the temperature of the grass. Extreme temperature difference of fourteen degrees has been observed between these two points but this is exceptional. Even a few degrees difference can, however, make a great difference in the frost-free period. For example, the average frost-free period for Vineland, Ontario, as measured at the screen level is 178 days but at the grass level the frost-free period is reduced by almost two months to 124 days. This indicates the care that must be exercised when using the tables which are based on screen temperatures. There is certainly no substitute for knowledge of local conditions.

There are many interesting facts hidden in the mass of material assembled in this report. One such item is that the average frost-free period at Kedgwick, New Brunswick, is sixty-nine days, only three days more than that at Aklavik in the Northwest Territories. It is, moreover, encouraging to see the great increase in the number of meteorological stations. While many have been reporting for only two or three years, the additional information supplied by these new stations will be invaluable in years to come.

C. R. CROCKER.

* * *

La Vérendrye, Fur Trader and Explorer

by Nellis M. Crouse
(The Ryerson Press, Toronto, \$5.00)

La Vérendrye, Fur Trader and Explorer, is a scholarly work on the

(Continued on page XII)




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(Continued from page XI)

heroic exploits of the man who first opened our Great West to European development. Its theme could not be more sympathetic to Professor Crouse, whose earlier books on North American exploration find in this book their natural culmination. Two hundred and twelve pages of well-knit text, divided into nine chapters for the main episodes of La Vérendrye's active life, give a remarkably clear account of his long and arduous struggle against hopeless odds to reach the imaginary Western Sea that was supposed to give egress to the Pacific from our continent's heartland. To supplement his historical narrative, the author provides seven appendixes on controversial matters, themselves models of conciseness and acumen, and five pages of bibliography, and devotes another five to an index which affords ready access to persons and places. In addition, there are two illustrations and four maps. This book attracts the reader with good paper and binding, type that is a pleasure to behold, and not least by its handsome format. However, admiration is drawn most by his presentation of almost hopelessly involved sources so that the serious student and ordinary reader can both

follow them with interest and profit; the ability to handle this difficult material easily and well would seem to be unique with Professor Crouse in our day. Consequently, *La Vérendrye, Fur Trader and Explorer* is a work of the first importance in its own field. So high are the general standards of writing and scholarship throughout, that it comes almost as a shock to realize that even this author must plod along patiently with *La Vérendrye* on the tortuous paths taken by his Plains Indian guides. In the end, despite all the frustration and seeming failure of the great explorer's career, we are left with the feeling of his indomitable will — of ultimate assurance that others would carry through what he had begun, and that his name would long survive the ridicule and indifference of his contemporaries.

A. E. H. PETRIE

* * *

Carnival Bound

by Bruce Russell

(Macmillan, Toronto. \$4.00)

This is a cheerful book by a young Australian Odysseus, gifted with a journalistic pen which enabled him to

recount his American odyssey with youthful gaiety, and to put forward the humorous side of his sundry misadventures. To all intents he reviews his own book for us in two lines on the first page, "a 30,000-mile walk and hitch-hike through jungles and desert, and through fourteen countries with no more serious goal than to see a Mardi Gras festival."

It was the generosity of his own newspaper, *The Melbourne Herald* that transported him to Vancouver, theoretically to study journalism, but first of all he found it necessary to restore his own financial balance by taking a clerical job at Kitimat. But it was quite impossible for him to stay anywhere for long and soon he was hitch-hiking his way into Alaska, and it was here, under the wakefulness of the midnight sun as he lay in his sleeping-bag, that he resolved to make his way to the carnival at Rio de Janeiro. His adventures and his very varied means of travel through eighty degrees of latitude southward make entertaining reading and are a perfect example of that truly Australian expression, "gone walkabout". He survived the good moments and the bad with buoyant equanimity, and he possesses the youthful pioneer faculty of coming out on top despite the inevitable perils that await the lad who sets out from Kotzebue to walk to the carnival at Rio.

The author's own photographs add to the attractiveness of the book.

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